

NEWS SUMMARY

BUSINESS

die as Gold falls \$4½ on IMF sale fears

GOLD fell \$4½ to \$1244, its lowest level for two years, on fears of gold sales by the IMF. • **WALL STREET** closed \$14 up at 949.86. Turnover, at 36.8m. shares, was above 30m. d.

Five people died in the gales which Britain, among them, an old Bristol man who died when a freak gust punctured him on to the roof of his car near Bath. Wind of up to 126 mph were d.

Gales disrupted air, sea travel in many parts of the world, the north of and along the south coast ploughs were out in

ear ferry "Lion" from berthed at Cowes on the Isle of Wight last night 24 hours late. Sailings the Isle of Man and toot were cancelled.

A small trawler which had been reported on fire, helplessly in mountainous the Outer Hebrides last Hurricane force winds pre-Barra lifeboat reaching

weather, Back Page

equities drifted in light trading. The FT 30-share index moved up 1.5 to 396.2 but the FT-Arturaries All-Share index fell 0.3 per cent. to 166.7.

GILTS partially recovered after early caution following an easier money market. The Government Securities Index closed 0.15 down at 62.28.

STERLING fell 15 points to \$2.0310; its weighted depreciation was unchanged at 30 per cent. The dollar's widened to 2.50 (2.38) per cent.

U.S. TREASURY bill rates fell to new lows three-months at 7.75% (4.83%), the lowest since June; six-months at 5.04% (5.06%), the lowest since January, 1972.

New electricity price rises

ELECTRICITY: Council wants increases of 5 per cent. on industrial rates and about 10 per cent. on domestic from April. Further increases of 5-10 per cent. can be expected in the summer, Back Page.

CEB negotiating team will today broadly recommend the price restraint scheme agreed yesterday with Mrs. Shirley Williams, Prices Secretary, which keeps rises on certain items to below 5 per cent. for six months. Back Page 9.

BP OIL and National Benzole have followed Esso's lead in reintroducing selective discounts to petrol dealers which could mean a 1p per gallon cut in prices to motorists. Page 9.

U.S. GNP rose by 5.4 per cent. in real terms in the last quarter, following the record 12 per cent. rise in the third quarter. The year showed an overall fall of 3 per cent. State of the Union message, Back Page; Editorial Comment, Page 14.

EEC IMPORT duty on old potatoes, 14.4 per cent. in the U.K. has been temporarily suspended to ease serious shortage and high prices. Page 37.

JAPANESE exports declined in 1975 for the first time since 1953. Preliminary certified statistics show a 0.2 per cent. fall below 1974's level to \$59.05bn. Page 4.

EEC COMMISSION will be asked by the Association of European Steel Producers to take steps to try to prevent the imposition of U.S. import quotas on foreign special steels. Page 4.

COMPANIES

WIDOW of MEPC's founder, Mrs. Claude Leigh, said at the company's annual meeting it was "absolutely stupid" to run a property company without a property man in charge. Page 33.

BAKER PERKINS is making a profit on a three-for-one rights issue of 22.5m. at 50p. Page 32 and Lex.

ast blasts fed through Woolworths heart of Belfast after two exploded. The store had opened following a tele-calling 15 minutes before its.

Istra Norwegian supertanker Istra, 223,000 tons, sank a minute of three explosions according to two Spanish firms. The search for further survivors continued in the Page 8.

ly ... visitor Mrs. Laura Lambo was criticised in the on the death of baby Meurs is to be moved to a job by Norfolk health y.

ature, the horse which in the alleged betting Carmel in August, 1974, stably when he fell at a three-for-one rights issue of 22.5m. at 50p. Page 32 and Lex.

PRICE CHANGES YESTERDAY

in pence unless otherwise indicated)	Allen Harvey & Ross	450 - 20
RISES	Assed. Paper	40 - 32
11pce \$1.1001 + 1	Bitter (P.)	159 - 5
and Wilson 86 + 3	Continous Stationery	32 - 4
Bank 330 + 10	Gesteiner "A"	16 - 5
335 + 7	Hall (M.)	117 - 5
"A" 37 + 4	Hoover "A"	323 - 13
"A" 85 + 7	Laing (J.) "A"	119 - 4
118 + 4	Morgan Grampian	51 - 4
60 + 5	Office	45 - 5
231 + 24	Tunnel Hides "B"	188 - 6
Link 22 + 5	Union Discount	260 - 10
Bridge Secs. 22 + 4	Weyburn Eng.	505 - 9
rebus "A" 180 + 5	BF	555 - 5
Int. 282 + 9	Anglo Amer. Gold	1241 - 1
and Fisher 104 + 5	Botsawana RST	60 - 6
Pharm. 34 + 7	Cons. Murdoch	780 - 20
Discount 230 + 10	De Beers Dfd.	312 - 5
230 + 6	Gold Fields SA	1181 - 14
230 + 5	Randfontein Estates	1124 - 14
230 + 5	Southwicks	2471 - 35
230 + 10	West. Dfle.	2471 - 14

Unemployment trend shows no signs of abatement

Figures for jobless rise to 6.1% post-war peak

BY WILLIAM KEEGAN, ECONOMICS CORRESPONDENT

Unemployment in the U.K. is continuing to rise very sharply, with no signs of any deceleration in the trend. Between mid-December and mid-January the total number of people registered as out of work shot up by an unprecedented 218,911 to 1.43m.—the highest since 1939, and equivalent to 6.1 per cent. of the labour force.

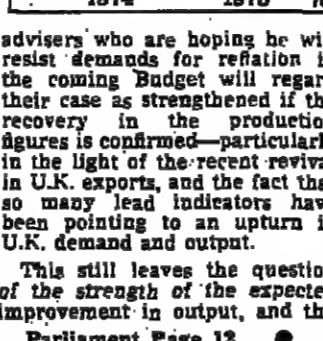
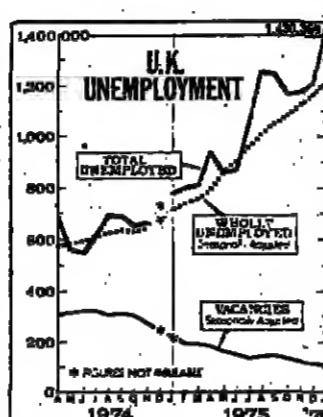
This "crude" figure was once again inflated misleadingly by the inclusion of another 116,428 adult students (in addition to nearly 10,700 last month) who register during vacations in order to qualify for supplementary benefit.

Even after allowing for students and some 40,687 school-leavers on the register, however, there was another steep increase of 42,300 in the seasonally adjusted figure of wholly unemployed—to 1,205m. (or 5.2 per cent.)—also a post-war peak.

Official forecasts both from Whitehall and international organisations such as the Organisation for Economic Cooperation and Development suggest that the seasonally adjusted U.K. figures will go on rising to the region of 1.4m. to 1.5m. by the autumn, implying an unadjusted total of some 1.6m. to 1.75m.

It is assumed that if the subsequent output figures, there may be at least a levelling out in the unemployment trend during the second half of this year.

Those of the Chancellor's Regional map Page 8 • Parliament Page 12 • Editorial comment Page 14



fact that in any case a recovery in employment lags at least six months behind a genuine turning point in output, the initial effects being a reduction in short-time working and more overtime.

Another crucial point, although it is not stated openly by Ministers, is that the unemployment trend and the depth of the U.K. recession are key factors in the strategy in slowdown of the U.K. inflation rate.

Meanwhile, it is understood that the inclusion of the adult students in the crude unemployment totals is causing the Government increasing discomfit. An inter-departmental committee has been examining the problem for some time.

Quite apart from the question of whether the students should be allowed to continue supplementing their grants with Government money during vacations, there are those who would at least like to remove them from the official register. On the other hand, some of the "purists" argue this would be a waste of resources.

This still leaves the question, unfair, on the grounds that, at least of the strength of the expected improvement in output, and the Continued on Back Page

Executives feel impact of recession

BY NICHOLAS LESLIE

A MARKED worsening in the employment situation for executives—with little hope of an improvement for the growing ranks of jobless executives in the near future—is shown in a survey published to-day.

No executive job category has escaped the recession, according to MSL, the management consultants, who say that over the past two years there has been a 50 per cent. fall in demand. The only bright spot is a boom in the number of overseas employers.

The worsening situation is highlighted by a drop in the MSL index—based on job advertisements in five daily and Sunday national newspapers and the Economist—from 85 points to 78 in the final quarter last year. This represented the lowest level of executive demand ever recorded by the index.

Mr. Harry Foot, MSL chairman, said: "All of our evidence suggests that demand for redundancy and lay-offs will continue to fall." This is evidenced by a steadily growing number of applications being received from executives who have been displaced or otherwise unsettled by the present crisis and also by the steady flow of inquiries from employers regarding the redundancy counselling services provided by MSL.

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Largest steel union rejects jobs cut plan

BY LORELIES OLSLAGER, LABOUR STAFF

SIR MONTY FINNISTON, chairman of the British Steel Confederation, yesterday decided that the British Steel Corporation's latest plan for labour economies of £170m. is unacceptable in its present form.

The ISTC executive decided to seek several amendments when the unions meet the BSC for what could be a crucial confrontation on the economy programme to-morrow.

Sir Monty Finniston, BSC's chairman, yesterday asked the corporation to let the unions know before Thursday what modifications and changes they gave in the programme. He gave no indication, however, that BSC is prepared for further negotiations with the unions.

Last night it looked as if Sir Monty's request for advance written information could not be met. Negotiators for the unions in the steel industry, which number over ten, will only decide their final reply to-morrow morning, immediately before meeting the corporation.

If the two sides get nowhere to-morrow, as looks likely at the moment, and if the BSC decides to go ahead with implementing its plan unilaterally, massive industrial confrontation looks

redundancies and eliminate premium weekend shifts, which many steel employees work as part of their normal 40-hour week.

The union is apparently unhappy, too, with the BSC's state of mind that, because of the present £6 pay policy, there can be virtually no pay rises for men undertaking new and extra work at a number of plants. Strikes now taking place at four Welsh steel plants may be made official.

Depending on the atmosphere on Thursday, even national strike action may be considered, although this remains only a remote possibility.

The ISTC executive will meet again on Friday to consider the outcome of the talks and will discuss at least selective strikes at a number of plants. Strikes now taking place at four Welsh steel plants may be made official.

In addition, the ISTC is said to want further assurances that the guaranteed working week will be maintained.

• A delegation of nine Labour

MPs, all from steel constituencies, is to see Mr. Eric Varley, Industry Secretary, about the latter's claim to the rights unthreatened redundancies in the steel industry.

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New thinking on population policy

BY C. GORDON TETHER

IT IS GOOD to see that Father better health care would contribute to the success of population control programmes, there will be a long wait in many of the most needy countries before they can start yielding such fruit. The reason quite simply is that half their populations are illiterate and the same proportion of their children lack schooling.

In the meantime, the excessive growth of the population will inexorably—in the process complicating the problem of mobilising the resources without which the basis for the increased production needed to raise living standards will never materialise.

The implication is, as Father McCormack puts it, that "reducing population growth and promoting socio-economic development are mutually reinforcing and together lead to a higher quality of life."

Inundated

It is somewhat that, although the argument between the two factions assumed a decidedly vehement character during the Bucharest conference, the exchange of views was sufficiently effective in the end to produce a change—or at least a modification—of attitudes on both sides of the debate. Certainly only this would seem to explain the fact that, although the UN's Fund for Population Activities was widely regarded as having come down completely in favour of the developmental approach, the UN's Fund for Population programmes in going all out for economic development and social justice. For while this has been done, the birth rates have come down whereas, where such progress has been lacking, they have remained high.

Overlooked

So closely have many of them become wedded to this view that they have been inclined to write off attempts to curb the rise in Third World birth rates as being more or less totally irrelevant. And the result of this has been to get them locked in a bitter long-running argument with the family planning enthusiasts which erupted in no uncertain fashion at the Bucharest World Population Conference in 1974.

In reality, this is a case wherein there is a great deal to be said on both sides of the argument. And both are doing a disservice to their common cause by raising living standards to aadequate level in the non-oil developing countries, trying to shout the other down.

It is this that Father McCormack sets out to demonstrate in chapter-and-verse fashion in an article on "Population and Development at Bucharest and After" which he has contributed to the quarterly review of the Society for International Development.

And he does it very well. He starts by making the point that, while it is undeniable that rising living standards have produced falling birth rates in the advanced world, the evidence adduced from the developing world is far from conclusive. And he then goes on to stress something that the protagonists of the developmental approach for too often overlook.

It is true, even if there is a modicum of plausibility to the theory that more education, more employment opportunities and

RACING BY DOMINIC WIGAN

Three for Blackshaw
BRITAIN'S most-travelled National Hunt Jockey, Martin Blackshaw, who still spends much of his time commuting between engagements on the Continent and in this country, could be the man to follow at Market Rasen to-day.

Blackshaw, who celebrated his 25th birthday on Monday with another course and distance winner, and the lightly weighted Ballylough Vi will probably give him most to do.

Despite the presence of Ocean Voyage, a respectable second of

the race, a respectable second of

<p

The Rhinegold

by DOMINIC GILL

The second of the English National Opera's three Ring Operas this season, in the by now established Byam-Shaw and Fletcher production, was introduced on Monday by a *Rhinegold* of four scene changes - new sets, Wotan, Fricka and Rivers, replacing last week's Derek Hammond Stroud, made an effective Alberich which is ahead that peculiar, unattractive, Ring-anagram of rest and delight: impossible ring dramatic production and quality of acting generally say enough to send any self-respecting theatre - director - into the wings, passing into the wings, passing a single, marvellous, unforgettable moment.

Barber Mackerras we now know as a good, if not great, operatic conductor. His performance Monday lacked the inimitable drive, surge and swell the finest Wagnerian directors, but it had its exciting moments - and the general standard of playing he commanded indeed admirably high for a relentless and taxing performance schedule. The real E flat sound-curtain of opening, the precision of the elating music, the two tremendous climaxes as Alberich sends dwarfs scurrying away - memorable gestures, beautifully timed and shaped. And more, no doubt, to come.

His strongest of the new

was the Wotan of Ral-

and Hertha: robust of voice

and luminous, nicely

intoned. But the evening is rated still - usually, as well

as by Byam Shaw-Batchelor and Ann Howard a pleasant, but wooden Fricka, too shy in voice and movement. Of Ralph Vaughan Williams' evocative scaffold-tube Valhalla, the tarmac stage and multi-purpose piles of steel girders, more later maybe. If the Rhinemaidens' voices were painted matt-black, they would shine a little less brightly under water!

The Byam Shaw-Batchelor

are still entranced what must surely be the seaboard's mortal fight between giants ever staged - a pike in the bottom with a spear. Wotan rushes away from Freia to greet her when she returns with Fafner and Fafner confirming our suspicion that he has, by now, a terrible allergy to giants. A moment of more poignant comedy: Fafnir stands right next to Wotan's huge pile of gold for at least five minutes before he sees it for the first time. Just a hint of double-take could make it perfect.

London Polytechnic

Indian architecture

by H. A. N. BROCKMAN

small but interesting exhibition of Indian architecture is on benefit of its sun-worshipping sect, is still used for Brahmin ablutions and a Jaishamer city Marylebone Road, from 9.30 a.m. until 7.00 p.m. weekdays until now successfully adapted as a library 27.

The title "Formal Structure in Citadel of Fatehpur Sikri, Indian Architecture" is slightly a 1575 remains as a national leading as nothing is said or monument and a show place for the structural methods taught.

The decorative intricacies of Indian architecture are invariably put together with great care with essential simplicity and Kishan Hardey and shows by directness, and the photography, drawings and text emphasises the calm and solidity of ancient work which of these creations in the clear over the centuries changed Indian light. The draughtsmanship used to delineate plans and sections of buildings is of very

1026 AD, for instance, high quality.



Cormac McCarthy as the King in Shakespeare's 'Henry V'. The Royal Shakespeare Company's production seen at Stratford-upon-Avon last year opened last night at the Aldwych

New York Theatre

A not so very happy new year

by GEORGE OPPENHEIMER

seems these days that a play sooner opens than it closes. Ham or not, he acted his role to perfection and was the best judge. We often deserve everything given in addition to its victim by better treatment. Two Ronald Ribman is one of our apes of the latter, are playrights who continue to be greatly promising for too long to rest on their past laurels. *Among Friends*, a comedy-drama by Bob His *Ceremony of Innocence* came to a near fulfillment and then he retreated. His *The Poison Tree* is better than promising yet, for all that it lasted only four performances. It took place in a prison, largely populated by blackguards and ruled over by a group of particularly vicious guards and a do-nothing warden.

The cast was excellent - Cleavon Little as a dedicated revolutionary, Moses Gunn as the wife's lover and the two lovers are one and the same man.

I do not ask me to explain the logic in this situation. Mr. had more red herrings in play than characters and yet, all its inconsistencies and etched motivations, it was a good fun.

There were bright lines of light amidst the mayhem. A fine performance by Jack Palance as the nefarious busi-

ness man, three of our finest black actors, and a relative new-comer, Northern J. Callaway, as acted otherwise.

There was also a good per-

formance by Robert E. Thompson

by one of the guards and com-

mits suicide. There was also an effective performance by Peter Masterson as the double-dealing disreputable, doing the latter in such an exaggerated manner that the

white guard.

There was power in the play, play resembles one of Dion Boucicault's more lurid melodramas out in the second act and drama.

The second item is Booth Tark-

Television

What else is new

by CHRIS DUNKLEY

Before fulfilling last week's promise to complete my guide to the multiplicity of new series and serials which have suddenly appeared, I have a message to send to The Rt. Hon. John Freeman. Although he has at various times been an MP, British Ambassador to Washington, editor of the *New Statesman*, and High Commissioner in India, Mr. Freeman is, I would guess, still remembered best by the television viewing public as the interrogator on *Face to Face*.

Now, however, he is chairman and chief executive of London Week-end Television and my message is this: If you believe that a regular Saturday night schedule comprising one appealing prize quiz show, two repeats, two old movies and 15 minutes of news is a well balanced evening of high quality programmes - I don't. If it looks to you, as it does to me, more like a breath-takingly cyclical attempt to buy the largest possible number of viewers for the lowest possible price, with no apparent regard for the balanced range or quality of programmes, couldn't you as chairman and chief executive do something about it, and pretty quickly?

And now, in alphabetical order, nine more new series and serials: *Heidi Cheshire* (Mondays, 9.30 p.m., Yorkshire). Episode 1 did look rather as though a documentary crew had gone along and filmed a radio programme - there was only one visual gag in 30 minutes - but this hijacked BBC radio show is certainly funny.

Of course, more people watch television nowadays than listen to radio. *Lowshot* of the show was the "mixed radio channels" skit, an idea that I used myself the very first time I appeared at a stage at a Woll Cott Christmas party. *Eightights* were Barry Cryer's mockingly irreverent of *World War II*, and the joke about George III on the telephone: "Hello, Scotland Yard?" was followed by George IV.

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Paddington (Weekdays, BBC1). It is rather surprising that Michael Bond's *Paddington Bear* is a newcomer to BBC1's consistently high quality series for young children. There are only two more episodes to go in this six-part series, quite different from that of *Spirit Of The Age*. I wish the two series had been shown in reverse order. It makes more sense to look at the landscape and man's broad effect upon it, and then at architecture within the landscape, than it does to go from the buildings back to the land. However, this does not detract from the programme made by Professor Hopkins, producer Peter Jones, and cameraman Nat Clegg, which are sightfully beautiful to look at (scare yet another mark for the helicopter as well as Crosby) and packed full of the sort of facts that make you say "Good grief, so that's why..." I only hope that the professor is not going to force feed his thesis that landscapes are much more radically affected than we can imagine by man.

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Play Sport (Tuesdays, BBC1). Although it is presented by David Vine and transmitted late at night this looks an interesting series. Certainly the first programme on trampolining was worth watching - however, would one ever have discovered that the trampoline was invented

in the thirties by a diver for

Oscar Peterson's Piano Party

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WORLD TRADE NEWS

SPECIAL STEELS

Japan would react strongly to imposition of U.S. import quotas

BY PETER DUMINY

JAPAN is likely to react a disproportionate impact on a period of 1974. Steelmakers which dominate the number of smaller steelmakers point out that the drop occurred in the steel market (and for special steel, though no official announcement has been made on the subject and none is expected during the 60 days that President Ford has to make up his mind on the January 17 recommendation by the International Trade Commission (ITC).

The exports which would be directly affected by the proposed EEC and Sweden, which in total amounted to 183,000 tons worth \$185.3m. in 1974. In 1975 shipments are believed to have risen to 180,000 tons, of which about 146,000 tons a year U.S. ceiling are relatively insignificant. However, the Japanese may regard it as a test case with protectionist implications for a much larger part of two-way trade. In addition, the U.S. quotas would have

restraints in respect of the U.S. to be imposed on Japanese exports of special steel, though no official announcement has been made on the subject and none is expected during the 60 days that President Ford has to make up his mind on the January 17 recommendation by the International Trade Commission (ITC).

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This compares with Japanese exports to the U.S. of 5.2m. ton (annual rate) of carbon steel in the nine months ended last September, a decline of 8 per cent compared with the corresponding

Severe consequences for Sweden

BY WILLIAM DULLFORCE

THE IMPORT quotas for Swedish special steel exports to the U.S. recommended by the U.S. International Trade Commission, and received here to-day from the Swedish embassy in Washington, would entail substantial cuts in exports of alloy tool steels and stainless bars and rods. They would be a severe blow to companies such as Uddeholm (U.S. exports worth roughly Kr.100m.), Fagersta (Kr.80m.) and Stora Kopparberg (Kr.40m.).

The quota would affect about half the Kr.400m. (Kr.85m.) of

Swedish special steel exports to the U.S. Global Swedish exports amount to about Kr.2.8bn. (£315m.) a year.

The Swedish steelmakers have commissioned American lawyers to act for them and have given evidence to the ITC. They are meeting here on Friday to discuss future steps but are now looking for action from the Swedish Government.

Basically, the Swedish position is that the ITC recommendation conflicts with GATT principles. They ask why the ITC did not

and is unjustified by the prosecute for dumping under the evidence. They reject charges of Fair Trade Practices Act, if it price-cutting and Government was convinced that the Swedish subsidies made last week by a joint American labour-industry cutting. Publicly the Swedes

affirm that the worldwide recession, not foreign competition, is only privately owned. The responsible for the troubles of the American special steel industry. Privately, they say the grants for plants in depressed areas and these are comparable with grants received by U.S. companies. It is claimed,

they ask why the ITC did not

accept the recommendation could have serious consequences for the French steel industry which last year exported some 47,000 tonnes of special steel to the U.S. nearly one-tenth of its total exports. Exports to the American market rose slightly last year, while those to other countries declined.

Guy Hawtin adds from Frankfurt: The Wirtschaftsvereinigung Eisen und Stahlindustrie, the West German Steel Producers' Association, said to-day that it had no comment to make on the prospects of U.S. import curbs.

A spokesman said that the steel industry is that the U.S. association was currently aimed at talks with the West German Japanese manufacturers.

If accepted, the recommendation could affect U.S. exports of the much smaller Dutch company N.K.F. Staal, a wire manufacturer owned by the August Thyssen-Huette of West Germany.

Robert Mauthner adds from Paris: The French steel industry is seriously disturbed by the recommendation of the U.S. International Trade Commission to subject import of special steel for acts of protectionism but is

waiting to see what action the U.S. Administration takes before the European Steel Producers' adopting a formal position.

STOCKHOLM, Jan. 20.

EEC asks Commission to intervene

BY MICHAEL VAN OS

THE ASSOCIATION of European Steel Producers, which represents all national organisations in the nine Common Market countries, has asked the European Commission in Brussels to take steps in the U.S. to try and prevent the imposition of U.S. import quotas on foreign special steels.

A spokesman for Estel, the big Dutch-German steel company, who revealed this to-day, added that the association felt that such a U.S. measure could be a first step towards, or a precedent for, acts of protectionism but is

waiting to see what action the U.S. Administration takes before the European Steel Producers' adopting a formal position.

Government, the European Economic Commission and the U.S. International Trade Commission. Until they were completed comment would be premature.

However, there can be little doubt that the association views the prospect of U.S. import controls with dismay. After more than a year of severely depressed demand, West Germany's steel producers can hardly be expected to welcome moves limiting their export potential now that things appear to be picking up a little.

Initial reaction in the British market is that the U.S. proposals were chiefly aimed at talks with the West German Japanese manufacturers.

AMSTERDAM, Jan. 20.

STOCKHOLM, Jan. 20.

World Car Markets

S. African sales steady

BY GRAHAM HATTON

SOUTH AFRICAN new car sales continued to march forward in 1975, showing a rise of 0.99 per cent. on the 1974 total, despite a sharp downturn in the economy. Anticipation of rising prices was possibly the chief reason. However, with the introduction this month of a television service, consumers have a new durable to spend their money on and car sales are likely to take a beating in 1976. With more than half of the market in the hands of five companies—Volkswagen, Ford, Datsun, General Motors and Toyota (in that order)—the rest are going to have to work for survival.

SOUTH AFRICAN CAR SALES

	1975	% mkt.	1974	%
Volkswagen	35,943	15.49	34,328	-0.32
Ford	31,162	13.41	30,420	+0.20
Datsun	29,563	12.91	26,302	+1.32
General Motors	24,675	12.43	30,828	-1.16
Toyota	16,215	7.08	15,799	+0.17
Peugeot	13,995	6.11	15,348	-2.65
British Leyland	13,188	5.76	13,421	-1.54
Chrysler	12,783	5.58	16,620	-17.4
Mercedes-Benz	10,749	4.69	9,550	+0.62
Mazda	8,990	3.93	8,799	+0.04
Fiat	7,776	3.18	7,599	+0.73
Alfa Romeo	6,697	2.97	7,003	+1.24
B.M.W.	5,310	2.32	2,650	+107
Citroen	3,951	1.73	5,302	-2.60
Volvo	2,231	0.97	1,885	+6.15
Hornet	1,728	0.75	1,199	+42.23
Renault	569	0.26	837	-1.10
Lancia and other	73	0.03	85	-2.5
Jeep	1	nil	—	—
Total	229,681	100	226,776	100

* Change in the percentage of the market in 1975 compared with same period 1974.

Swedish equipment for first bagasse pulp mill

BY JOHN WALKER

ELOF HANSSON, the Swedish Finland trading company, has received a contract from Peru for the manufacture of machinery for the delivery of newspaper pulp from bagasse, the sugar waste product. The new mill will be operated by the State-owned pulp and paper company Indupulp of Lima.

Indupulp has placed the planning and purchasing work in the hands of U.S. and Mexican consultants. They have also acquired the rights to the Mexican case process for the manufacture of combined semi-mechanical pulp from bagasse.

Phillipines sugar plant

FLETCHER AND STEWART Power of Alberta for a 350 MW turbine-generator and auxiliary equipment.

Williams and Glyn's bank—under the guarantee of the Export Credits Guarantee Department—has made available a £10.437m. medium-term loan to Calgary Power towards the £15m. contract.

Honeywell introduced a family of minicomputers it claims will be the most complete product line in the category being offered by a major general-purpose computer manufacturer. The new Level 6 family ranges from \$3,800 to about \$60,000.

General Electric has signed a £15m. contract with Calgary

China may place \$1.2bn. plants order with Japan

BY COLINA McDODDALL

A CONTRACT worth \$1.2bn. for sales of Japanese industrial plant to China could, in due course, result from the current visit of a Japanese trade group to Peking, according to Japanese Government sources quoted by Agence France Presse in Tokyo.

The deal is reported to include, besides a refinery and petrochemical plant, steel-making, chemical fibre plastic, synthetic rubber and chemical fertiliser plants, large-scale, civil engineering, agricultural machinery and steel materials. The proposal was said to have been made by the Chinese through the Japan-China Association on Economy and Trade. A mission from

this Association, led by President Mr. Yoshi Imai, chairman of N. Steel, is now in China, also discussing the sale of additional 2m. tonnes of iron in exchange for a Japanese agreement to import an additional 2m. tonnes of Chinese steel.

To facilitate the plant the Japanese Government said to be expected to grant Export-Import Bank full credit of up to 100% of the cost of the plant.

Japan is large enough to meet the Chinese purchases. Interest have not been agreed.

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the Chinese side is now in Japan, also discussing the sale of additional 2m. tonnes of Chinese steel.

The Ministry said preliminary exports for 1975 totalled cars and television sets \$80.058m., a decline of 0.2 per cent. from the previous year, chemical products and the first year-to-year drop since 1953.

Reuter

The Newark Industrial Estate offers superb access to Humberside Ports Industrial Midlands London The North

Situated near the junction of the Great North Road (A1) and the Foss (A46), the Newark Industrial Estate offers superb access to the major ports of the Industrial Midlands, as well as London and the North. Occupying 25 acres this supremely accessible site has everything to offer the industrialist who is considering re-location, and is ideally suitable for companies engaged in light engineering, warehousing, transport, plant hire or similar light industry. Offices accommodation available in town centre.

* Midway between London and the North

* Midway between Humberside and the Midlands

* Access by road, rail or river

* Labour force readily available

* Helpful consideration with housing

* Leisure Sports and Cultural facilities

* No mining subsidence

For further information Richard Crumpton, A.R.I.C.S. Estates & Valuation Officer, Newark District Council, Kelham Hall, Kelham, Nr. Newark, Tel: Newark (0638) 5111.

Newark District Council

THE WOLVERHAMPTON & DUDLEY BREWERIES, LTD

BANKS HANSO

Year to 30th September (£'000)	1975	1974	1973
Turnover (excluding VAT)	26,496	19,815	18,524
Profit before tax	4,213	3,425	3,845
Ordinary dividend per share	4.67p	4.38p	4.23p

- * I am pleased to report a record turnover up 33.7% and Profit before tax up 23%. The total dividend is the maximum allowed under present regulations.
- * The increased turnover of our licensed houses reflects the success of our capital investment programme. Our future financial requirements are well covered by existing borrowing facilities.
- * During the year we entered into a co-partnership arrangement with Herp Lager Limited whose high quality lager we keg and bottle.
- * The trend of beer drinkers to take more heed of the distinctive flavour of our beer can only enhance our sales.
- * The compact area in which we trade and the good order of our production units puts us in a strong position to control the effects of inflation. I look to the future with confidence.

E. J. Thompson, Chairman

Courts

INTERIM RESULTS (Unaudited)

	6 mths to 30.9.75	6 mths to 30.9.74	12 mths to 31.3.75
Turnover (excluding VAT)	16,922,000	12,584,000	28,377,000
Operating Profit	2,275,000	1,604,000	3,874,000
Deferred Profit	328,000	(7,000)	389,000
Net Profit before Taxation	1,947,000	1,611,000	3,485,000
Taxation (excluding stock relief)	975,000	798,000	1,829,000
Net Profit after Taxation	972,000	821,000	1,656,000
Interim Dividend (payable 28.5.76)	181,000	152,000	363,000

- * PROFITS Record half-year in both the U.K. and overseas.
- * STORES Over

AMERICAN NEWS

Democrat voters support Carter in Iowa polling

JUREK MARTIN, U.S. EDITOR

WASHINGTON, Jan. 20. — JIMMY CARTER, the Governor of Georgia, and — he had 27.8 per cent of the votes in — is impressive, particularly since he comfortably outdistanced his liberal opponents last night in Iowa. He was followed in the still incomplete results by Senator Birch Bayh from Indiana (about 13 per cent), former Senator Gary Hart from Oklahoma (10 per cent), Arizona Congressman Morris Udall (8 per cent) and Mr. Sargent Shriver with a little over 3 per cent.

However, some 37.1 per cent of the delegates chosen were committed to none of the half-dozen candidates represented in the state. Senator Humphrey, who has so far entered no state caucuses or primaries, is banking on a large uncommitted vote as of course, is only the first in a long process, not only itself but also in Iowa itself; there are still three other conventions to be encountered before a delegation to the New York Convention in July is selected.

Mr. Carter's tactics are precisely the reverse. He has every reason to feel that the Iowa results will give him a certain momentum in the countless races ahead. He certainly seems to have put a little distance between himself and the other liberal runners, as he knows he must do if he is to achieve success.

He said this morning: "A lot of people who haven't made up their minds among several Democratic candidates will tend to go with the ones who have demonstrated their ability to win."

By the same token, Mr. Udall, Mr. Shriver and perhaps Mr. Hart can have gleaned minimal comfort from their showing in Iowa and the first two may be out of the game already. Senator Henry Jackson made only a very minor effort in Iowa but if he was hoping for an unexpected surprise, he was disappointed with the declared candidates, which he ultimately hopes to turn to his advantage as a party unifier at the New York Convention.

On the Republican side, the campaign managers of both Mr. Ford and Mr. Reagan claimed victory.

WASHINGTON, Jan. 20.

Trudeau reasserts belief in capitalism

By Victor Mackie

Ottawa, Jan. 20. — PRIME Minister Pierre Trudeau has reassured Canadians that his Government has no plans to throw out the present economic system. His speech was delivered to "clarify" some comments he made on December 28 in a year-end television broadcast which had caused a widespread outcry that Mr. Trudeau wished for a permanent system of economic controls, rather than the temporary measures introduced in October.

But to Mr. Trudeau's many critics the clarifying speech once more appeared to confirm that he wants permanent Government controls over the economy. He warned that the economy is not working well and must be changed before it gets worse. He said: "The economy is out of joint, and will get worse if we don't do something about it."

Mr. Edward Broadbent, new Democratic (socialist) Party leader, dismissed the speech as a typical political lecture of the type Mr. Trudeau is fond of delivering, but for attacking the Prime Minister for attacking no leadership at all.

Mr. Sinclair Stevens, financial critic for the Progressive Conservative Party, said that the Prime Minister made it clear that he plans to continue the controls over the economy as a permanent feature of his Government and demanded that Mr. Trudeau go to the country in an election to seek a mandate on his ideas which are counter to his no-controls programme on which he was elected.

In the 1974 election, Mr. Trudeau scoffed at the Tories for proposing a temporary freeze on wages and prices and said controls would not work in Canada — now he has embarked on a three-year controls programme.

Representative Benjamin

Rosenthal (Dem., N.Y.) the chairman of the Sub Committee said that the decline in the soundness of the banks had been evident since the late 1960s, particularly if measured by the decline in their capital-to-assets ratio. It was important to discover why the Government regulatory agencies appeared to have failed to halt the trend at that time.

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AP-DJ

GUYANA

End of a socialist feud

BY OUR GEORGETOWN CORRESPONDENT

MR. FORBES BURNHAM, the Left offering him critical support and the Parliamentary ALCAN subsidiary, Sprostons refusing to act since it is known Opposition, which is to the Right (Guyana), to the list of that he usually saves important indicated that his party stands announced free medical services for unity of all progressive to everyone from the new year forces, but that it will not allow free education from the new school year starting in September, and state take-over of all its identity to be submerged by the two mass socialist parties which they lead.

Some observers even feel that the talks between him and Dr. Jagan are being placed in the nationalisation of denominational context of this apparent desire schools, from this year. His

and the other has no virtues to commend itself.

Mr. Burnham's domestic economic policy turns on the belief that a Socialist economy can be established through use of the co-operative, and he entrenched that belief in naming the Co-operative Republic of Guyana when links were cut with Britain in 1970. The word "co-operative" qualifies all State financial institutions. But Dr. Jagan ridicules the attempt to achieve socialism through the co-operative and calls for "scientific socialism" based on Marxism-Leninism.

Both Mr. Burnham and Dr. Jagan claim that because their supporters number over 90 per cent of the people, an overwhelming majority of Guyanese are for Socialism. There is an organised Right-wing opposition of note to the march towards Socialism. The two-member Right-wing Parliamentary Opposition has no mass support.

This year the country will celebrate its tenth anniversary of independence on May 26, and there is little doubt that plans will be announced then for cutting away the remaining major vestiges of capitalism.

Ideologically, the two men are moving rapidly towards a common position. Mr. Burnham's PNC has publicly come out as a Marxist-Leninist party. Both the PNC and the PPP were official guests of the Castro government during the recent Cuban Communist Party congress.

The response from Mr. Burnham and his PNC has not been over-euphoric, but neither has it been cold. Mr. Burnham has recently been talking about a national political consensus building up with Dr. Jagan on his representation.

But thorny issues remain on the path towards a consensus. The presence of the Booker

Group continues to be seen by Dr. Jagan as an insult to a country on the path of socialism, and he is sticking fast to his demand for its nationalisation. Mr. Burnham has remained silent on the matter — which does

not necessarily mean that he is refusing to act since it is known that he usually saves important announcements for "the appropriate time."

There must also be problems with the rank-and-file level, who have been told over the past 20 years — since Mr. Burnham and Dr. Jagan split in 1955 — that one party is better than the other and the other has no virtues to commend itself.

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EUROPEAN NEWS

Nine split on trade link with Spain

By Reginald Dale

BRUSSELS, Jan. 20. THE NINE EEC countries to-day split sharply over how soon to grant political respectability to the new Madrid government by resuming trade negotiations broken off last October in the closing days of the Franco regime. After what German officials described as a "vigorous" argument at to-day's council meeting here, the Nine finally adopted a compromise formula half opening the door to Madrid, but postponing a final decision.

France and Germany argued strongly for an immediate decision to restart the trade talks, suspended in protest at the summary execution of militant opponents of the Franco regime. Britain, Italy and Denmark opposed such a move until the new Juan Carlos regime has shown greater evidence of progress towards democracy.

The ministers agreed, on the other hand, a joint EEC negotiating position for new trade talks with Portugal, which will now go ahead in the near future. Under to-day's compromise an Spain, the Brussels Committee will now resume contact with Madrid and report to the next council meeting of Foreign Ministers here on February 9 and 10.

It was quite clear after to-day's meeting, however, that Madrid can have no hope of opening entry negotiations in the foreseeable future. Mr. James Callaghan, the Foreign Secretary, told journalists there was general agreement among the Nine that Spanish membership was out of the question in present circumstances.

With his eye clearly on opinion in the U.K. trade union movement, Mr. Callaghan argued that the most urgent need was for Madrid to pass legislation guaranteeing the freedom of Spanish trade unions, providing in particular for free association and collective bargaining.

Roger Mathews reports from Madrid: The political tension, heightened by the strikes, spilled over yesterday into the National Institute of Engineers, where five Government Ministers were at the centre of a furious row between members. During a lunch at which the Ministers were guests of honour, the President of the Institute referred to the growing demand for a political amnesty. As some members applauded, others rushed the top table screaming "Murderer" at the President and tried to turn the table over.

Portuguese regime lists charges against Carvalho

By PAUL ELLMAN

OETELO SARAIJA DE CARVALHO, the civilian political figure who co-named as having played an active role in the headquarters of the cavalry regiment at Santarem, 50 miles north of Lisbon, which played a key role in the crushing of the Portuguese revolution, is a member of the Communist Party's Central Committee. He was to-day under arrest at a was allegedly in close contact with Major Jaime Serra, who November 25 uprising.

Major Saraija de Carvalho, laid it officially against him so far, it is expected that he will be tried in the days before November 25.

His arrest was ordered as a report was published by the Revolutionary Council on the Armed Forces Movement directly implicating him, along with the Communist Party and a number of Left groups, in the abortive uprising staged last November 25.

The report was published against the background of a strikingly ominous attack by the Revolutionary Council on the country's squabbling political parties who were accused of putting in danger the gains of the past 21 months.

A commission appointed by the Revolutionary Council to apportion blame for the November 25 uprising found that it was the outcome of a closely co-ordinated campaign by military officers and civilian groups who enjoyed at least the tacit approval of Major Saraija de Carvalho when, as a brigadier, he was commander of the Lisbon military region and head of the now dissolved Internal Control Council.

The report offered a detailed account of how the civilian and military campaign developed, naming a number of Left wing groups, including the Communist Party, the Marxist Popular Democratic Union (UDP) and the Proletarian Revolutionary Party (PRP), which has close links with Britain's International Socialists, as having played an important part at one stage or another.

The report also traces how workers from a number of companies, including the Lisbon shipyard Lissave, were mobilised to demand, and in some cases receive, weapons from Leftist-infiltrated military units. Among tures."



Major de Carvalho under arrest.

LISBON, Jan. 20.

Rapid 6% growth plan adopted by France

By Rupert Cornwell

PARIS, Jan. 20. THE FRENCH Government has bowed to powerful pressure from both sides of industry and pledged to aim at rapid expansion—perhaps as much as 6 per cent. annually—over the remaining years of this decade.

This was confirmed by the Elysee Palace this afternoon after a preparatory meeting chaired by President Giscard d'Estaing on the Seventh National Plan, covering the period from 1976 to 1980.

The decision to make full employment the over-riding goal of French economic strategy was taken despite the well-known doubts of certain Ministers and officials that such a rate of growth can be sustained without driving France deep into deficit and provoking intolerable inflation.

In doing so, the Government has accepted the arguments of both the employers and the trade unions that the country could not stand unemployment permanently around to-day's level of 1m-plus. Most calculations suggest that the lower growth option, of perhaps four per cent. a year, would have made little impression on this figure by 1980.

The Elysee, however, was quick to spell out the implications of the choice. It would mean, the spokesman said, a rigorous policy to keep the external payments in balance, which in turn would demand a moderation of price and income

strains. His arrest, along with that of others implicated in the November 25 rebellion, leaves the Left dangerously exposed in Portuguese politics, whether of the military or the civilian variety. In recognition of this, perhaps, Dr. Alvaro Cunhal, the Communist leader, has stepped up his own campaign in recent days against the non-Communist Left, warning that they have learnt nothing and would like to take Portuguese politics back to its pre-November state.

VIENNA, Jan. 20. THE AUSTRIAN Government has decided to inject more than Schillbn. (about £290m.) into the economy in order to stimulate demand and to accelerate growth. Finance Minister Dr. Androsch announced to-day.

Appropriations under the budget Sch.3.5bn. The introduction of the Institute for Economic Research, the economy should

be released primarily for a special 50 per cent. depreciation allowance for investment in

building industry, and for the growth by 1.5 per cent.

Austrian plan to boost economy

By PAUL LENDVAI

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Avenue Foch

Habiter Avenue Foch, à Paris? Autant habiter le bon côté. Côté droit, quand on descend. Côté soleil. Côté cinquante. Toutes les grandes avenues du monde ont un bon côté. Avenue Foch, depuis un siècle, les plus recherchées sont les numéros pairs.

Le cinquante. A un cinquante, s'édifie un ensemble nouveau et très fidèle à l'Avenue Foch. Avec des appartements de 3, 4, 5 pièces dans les superstructures. Et avec des hôtels particuliers de 4, 6, 8 pièces dans la partie basse où se mêlent patios, verdure, jardins suspendus : au total, 4000 m² de verdure sur les 5600.

Le calendrier des travaux. Il est conçu pour que, dès maintenant, vous puissiez vous décider sur les aménagements intérieurs que vous souhaitez - dans le cas où vous en souhaiteriez d'autres que ceux prévus par l'architecte et le décorateur.

Société de commercialisation : SFGI (anc. Bernheim F et F), 23, rue de l'Arcade 75008 Paris. Tel. 2854121. For the United Kingdom: Hermon Daw 26/28 Sackville Street - London W1X/2 OJ. Tel. 01-7348155. 63, rue Pierre-Charon - 75008 Paris. Tel. 2580726.

50, Avenue Foch 75118 Paris. Tel. 704.60.62. Actuellement, tous les jours, de 11 h à 18 h, sauf dimanche et jours fériés. Samedi de 10 h à 17 h. Dans le hall d'accueil et de vente : maquettes, plans et "livret de bord" édité à votre intention personnelle.

AS ITALY'S Government crisis moves into a critical phase, signs of re-optimism in the illegal capital outflow and an underlying deterioration in the balance of payments situation are beginning to indicate the nature of the extremely difficult economic cut-back which faces any new Government.

The indication that Italy faces a concrete balance of payments restraint on its internal growth prospects in 1976 also underlines the extent to which the ostensible causes of the Government crisis have little grounding in real life.

To-night, a Socialist Party

Bonn defence 'white book' takes tough détente line

BY NICHOLAS COLCHESTER

THE WARSAW Pact now has 19,000 battle tanks in active units—beyond mere military comparison in Central Europe and 3,000 more in the three western districts of the USSR, claims the interdependence of nations, according to the West German "White Book" on defence. The first Book is the danger that Nato is Warsaw Pact forces a concentration of troops in operational significance.

This is the most striking evidence of a build up in the Warsaw Pact's conventional offensive strength that is produced in the new White Book. Since 1970, it is claimed, the number of battle tanks stationed in East Germany alone has risen by 2,000. The Warsaw Pact reflects the political will of Soviet leaders to give striking power to political offensive and secure gains of the Government.

The subheadings in the paragraph "the military strategy of involved, namely that the Warsaw Pact" convey the detente may be taken for a strong tone: "Offensive prim itself. Wishful thinking

from being an important contributor to becoming the ringmaster of European defence. One quarter of it is now devoted to an examination of the philosophy

of individual members. I for instance, that the int. Britain and the Nether field of energy are very different from those other member nations.

Yet it emphasises almost breath that, if method were adopted, they should be clearly dissociated from any extension of the powers of European unification.

Following the recent Le Monde article by M. Albin Chaland, a former Industry Minister, an impressive number of recent supporters of the plan from a number of Gaullist leaders, led by the former Prime Minister, M. Michel Debre.

• Banque de France, which until a few weeks ago purchased dollars to prevent the franc from rising too high, is now reported to be selling dollars to prevent the French currency from dropping too low, AF-DJ reports. The central bank seems to have set a dollar rate of between Frs.4.48-4.49 to the dollar.

Among the signatures are such well-known names as M. Pierre Messmer, the late President Pompidou's last Prime Minister, M. Maurice Schumann, a former Foreign Minister, M. Olivier Guichard, a former Plan-

ning Minister, and a number of individual members. I for instance, that the int. Britain and the Nether field of energy are very different from those other member nations.

Yet it emphasises almost breath that, if method were adopted, they should be clearly dissociated from any extension of the powers of European unification.

• The Manifesto, however, lays down some very specific conditions on which the elections should be held. In the first place, they should be clearly dissociated from any extension of the powers of European unification.

• The Manifesto recognises the result of a negotiated agreement between the member countries. Secondly, voting should take place on the same day and according to the same rules in all the member countries of the Community.

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OVERSEAS NEWS

Syria controls intervention by the PLA in Lebanon

RICHARD JOHNS, MIDDLE EAST EDITOR

allegation, by Mr. Camille Haddad, the Minister of the Syrian Government, and Maronite Christian terrorist, that Syria has intervened directly on the Lebanon. It is well calculated to international alarm given Israeli warnings about such an eventuality. Though the leader of the PLO did not support the intervention, it is clear that the forces in the Bekaa valley are wearing insignia of the Palestine Liberation Army. The PLO, under the direction of the organisation's affiliate, the Palestine Armed Struggle Command, that too, goes for the Palestine Liberation Army.

It was founded in 1964 when the late President Nasser of Egypt allowed Ahmed Shukairi, then head of the PLO, to form

on Monday afternoon supporting armoured cars 65 mm. guns. It can be seen that they would not have been without the permission of the PLO.

On the morning of September 21, 1973, the Israeli

army wants at the mobility of the large tank formations on which Israeli tactics

Even the prospect of picking Southern Lebanon up to the Jordan River, while strategic

not begin to use for the disadvantage that would result from a pending Syrian move into the rest of disintegrating

on. For a direct Syrian-Israeli

the almost inevitable

of such invasions

behaviour is totally un-

due to the new burdens

and material losses

it'd heap on Israel, even if

not carry the risk of expansion into a wider Arab Israeli

Israel's anxiety to avoid as shown itself in the care-

warded nature of its warn-

about possible Syrian inter-

n in Lebanon.

Red forces must neverthe-

leave contingency plans for

the Israeli have theirs

They can be deduced with

amount of certainty from

and is not said in public

private by Israeli soldiers

military commentators. They

allow for the possibility

general war, or for a cam-

solely on the Syrian

or the Egyptian front

estingly. Israeli planning

directly counter to foreign

lusions about the lessons of

1973 war.

ability

sign experts have tended

the opinion that the large

deployment of precision

weapons, seen for the

time in the last Middle East

is greatly diminished the

venues of tanks and

attack aircraft in the

blitzkrieg attack.

is weapons anti-tank and

radar-automated cannon, they

can inflict such heavy

on tanks and aircraft

in the old, bold way

much more conservative

in their employment are

necessary. But that means

very least a general slow-

down of the pace of warfare,

an end to the whole

ability of rapid break-

h and exploitation leading

to victory. These are

the ideas that have

fundamental to the Israeli

of war. Israel, with its

to mobilise the entire work-

population every time it

cannot afford long wars of

in. Whether through wish-

ing or superior analysis,

soldiers have concluded

they can still fight a blitz-

war.

I accept that the effective-

aircraft over the battles-

as permanently decreased,

are replacing aircraft in

of their attack roles by

to-ground missiles and ad-

ed emphasis on artillery

in many reconnoisance

by the use of small,

remotely piloted vehicles

For the rest, they

on improved electronic

measures and the use of

smart bombs to through northern Jordan or

their aircraft to hang south eastern Lebanon aiming

to fight a decisive battle in the

out of danger.

even bigger problem has

open east or south of Damascus.

Rhodesia talks 'progress'

the Smith Government is African National Council's "a little more progress" made at yesterday's two-

session of talks in Salisbury. Tony Hawkins writes. A statement after the meet-

in the plenary session had particularly with the "the monetary structure," adding he two sides are to meet to-morrow. Yesterday's

session was the fifth of the full-scale talks started on January 6, taking the total spent in formal talks to than eight hours.

Ian Smith said afterwards he thought the discussions last "quite a long time."

stan fails

Minister Rama Mohan Hanif expressed the fear that Pakistan would not be able to afford the GNP growth of 9 per cent fixed by the Government.

Moham Hanif writes from Karachi. The reduced supply of water to the Tarbela dam, the un-

decline in the cotton and the slump in the prices

in international markets

CIA 'has undervalued arms aid to Angola'

By David Bell

WASHINGTON, Jan. 20.

THE CIA has consistently undervalued the cost of U.S. arms shipped to Angola by adopting a special accounting system, according to sources within the House Intelligence Committee.

The Committee is expected to publish a report on the agency by the end of the week which will include allegations that the CIA has deliberately undervalued the cost of the weapons it has been sending to non-Marxist forces in Angola—apparently in an attempt to keep Congressional critics at bay.

According to the New York Times, the CIA has for instance, been systematically reducing the cost of firearms at well below their actual cost to make it look as if the agency has spent less than the \$23m. per publicly earmarked for September.

One was the "Hittin'" brigade of the PLA which was already stationed in Jordan. The other two were said by Jordanian intelligence to be Syrian Armoured Brigades of the 5th Division. The fact that PLA was—and still is—mainly an infantry force lent weight to King Hussein's contention that this was essentially a Syrian invasion.

Current strength of the PLA is put at 6-10,000 men by Palestinian sources.

Soviets and Kissinger may agree

MOSCOW, Jan. 20.

THE TALKS between Dr. Henry Kissinger and Soviet Ambassador to Washington, Mr. Anatoly Dobrynin, were apparently

drawn up detailed proposals and an agreement is likely.

It is also thought that it may give

new impetus to the Vienna talks on force reductions in

the effect of the Angola situation on his Moscow negotiations.

Our relations with the Russians are complicated by Angola," he told

Press conference here.

Reuter adds from Peking: China

today made a bitter attack on Soviet intervention in Angola,

apparently timed to coincide

with the Foreign Minister's visit to Moscow.

Mr. Gromyko really fails to

not thought to feel as pressed

for time on the SALT agreement

as is often supposed," Mr. Brezhnev, with whom Dr. Kissinger will meet unless his

talks with the Foreign Minister

are included in the Vladivostok

agreement putting a ceiling on

the number of missiles and

the bombers each country would be

able to keep. The reported compro-

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Plessey announces 'major' investment programme

BY CHRISTOPHER LORENZ, ELECTRONICS CORRESPONDENT

Plessey Telecommunications yes activities at Beeston, Nottingham, went some way to out-ham, would be "enhanced" and lining its plans for the transition new work on the assembly and testing of electro-mechanical products testing of Pentex would be introduced to electronics by announcing a deal at Fleming Road, Speke, "major"—though unspecified—Merseyside.

investment programme which will start this year.

Included in the programme is the establishment at an existing factory in Chorley, Lancashire, of assembly and testing of the new TXE4 semi-electronic exchanges for the Post Office. Plessey at present has only one TXE4 plant, at Huyton on Merseyside.

The announcement also said that the Pioneer Works at Wigton, employing almost 500 people on electro-mechanical products would have to be closed by the middle of this year.

The closure forms part of the 2,000 jobs cut which Plessey announced in September after drastic cuts in Post Office orders.

Plessey said that it was accelerating the manufacture of electronic technologies... in order to take advantage of the design and manufacture of electronic products.

These products are far less labour intensive than electro-mechanical designs, especially in the high-volume telephone exchange sector.

Plessey told the unions before Christmas that there would be no more redundancies in the medium term—which is taken to mean until at least the summer—provided that there was no change in circumstances.

However, it will be considered an extraordinary feat if this applies throughout the next two years.

Our Wigan Correspondent reports: After a meeting with Plessey management at the Wigan plant, the joint shop stewards committee pledged to fight "tooth and nail" to stop the closure.

Mr. Derek Keen, the works convenor, said that management had still not explained why they had "picked on" the Pioneer Works. "We have evidence that the factory is a profit-making concern."

Mr. Alan Fitch, MP for Wigan, has said he is ready to act immediately to try to avert the closure.

Like all the Post Office's telecommunications suppliers, Plessey is facing a difficult period of labour relations, with short-term cuts in Post Office orders exacerbating the long-term rundown in employment as it gradually converts to the design and manufacture of electronic products.

Glasgow cuts must stay, says Ross

By Chris Baur, Scottish Correspondent

LEADERS of Glasgow Corporation failed yesterday in their efforts to persuade the Government to treat the city as a "special case" which should be exempted from many of the public spending cuts being ordered by the Scottish Office.

CARRIERS OF THE VARIOUS Large Crude Oil Tanker had on order a cost of about \$250m. which is gradually modernising the 25-months ago, only two are at sea, while the Ranger will join two other new vessels, the British African trades. The new vessels Reliance and the British from Mitsubishi of carrying break bulk, general cargo in mothballs in Brunei. After delicate negotiations, BP said it had reached agreement with grain or ore. Full consignment of the tanker loading will accommodate the substitute four cargo liners for 700 20-foot boxes.

New BP tanker will be laid up with two others in Brunei

By JOHN WYLES, SHIPPING CORRESPONDENT

BP's new tanker building programme was completed yesterday. The cargo liners are the first on a gloomy note with the of a new class of multi-purpose delivery of the 266,000-dead-ship to be built by Mitsubishi weight-ton British Ranger, and after their delivery next year they will be leased by BP to Ocean Transport and Trading the Liverpool-based shipping company.

Carriers of the VARIOUS Large Crude Oil Tanker had on order a cost of about \$250m. which is gradually modernising the 25-months ago, only two are at sea, while the Ranger will join two other new vessels, the British African trades. The new vessels Reliance and the British from Mitsubishi of carrying break bulk, general cargo in mothballs in Brunei. After delicate negotiations, BP said it had reached agreement with grain or ore. Full consignment of the tanker loading will accommodate the substitute four cargo liners for 700 20-foot boxes.

Ocean could be ordering ships on its account this year. Last week, it made a rights issue aimed at raising £23m. and its chairman said that, with the world's shipbuilding industry in the doldrums, this was a good time to buy on favourable terms.

The purchase cost to BP of the new cargo liners has not been disclosed, but the new VLCCs would probably have been delivered at about \$75m.

While this sort of substitution arrangement is now extremely common, because of the tanker surplus, the most common alternative vessel so far has been the bulk carrier.

Wide range of rises in water charges

By Donald Maclean

WATER RATEPAYER England and Wales face varying increases in water charges as a result of the decision last month that charges had been made people whose property connected to a sewerage

Repayments, totalling 260m., are due to those sewerage connection, according to the National Council—means an increase in general charges to connected properties.

The Thames Water Authority has prepared its 1976-77 figures on the basis of a 2 per cent increase on this plus about 2 per cent administration costs. North West Water Authority incorporated an increase of 14 per cent. Wesser, 12 per cent. Severn Trent, 31 per cent.

Proposals to go before Northumbrian Authority next week include a 17.3 per cent increase.

Test case

The need for refunds without sewerage connection challenged by Mr. Philmon, a Devon householder, in his case, decided in his favour by the Lord of Appeal.

Legislation to clarify water authorities in England and Wales set up under organisation of the industry in 1974, and to clear the refund by local authority as collecting a

expected shortly.

About 900,000 refunds

increases in charges by water authorities have to be made by the Price Commission.

The Welsh Water Authority yesterday agreed on a 2 per cent increase in its general service charge, 10 per cent of the 30 per cent increase resulting in Lord's decision.

Domestic water supplies are projected to rise 12 per cent, while metered supplies (going to non-residents) rise by 12 per cent, 60p to 56p per 1,000 gallons. Increase in the bill for services is up 17.4 per cent.

Unemployment by regions



Public sector deficit shows little change

By ANTHONY HARRIS

A PUBLIC sector financial deficit of £2.078bn. for the third quarter, shown in the new sector financial accounts published by the Central Statistical Office, is considerably lower than other figures about public sector spending have suggested, and shows remarkably little growth through the year.

This suggests that public borrowing has been swollen by late and deferred tax and rate payments and by lending to the private sector more than had been supposed, and that spending on goods, services and social payments has risen less than was thought.

The cumulative deficit for the first nine months of the year is £6.006bn., so the third quarter figure (which is seasonally adjusted) shows little underlying growth even in money terms. In real terms, allowing for cost inflation, the deficit has been reduced.

The figures for other sectors reflect the unprecedented level of personal saving this year. The personal sector's surplus—the excess of saving over capital formation (mainly in housing) reached £4.4bn. in the first nine months, 37 per cent higher than the average for 1974. Not all this was invested in financial markets, private people seem to have reduced their debts to the company sector by some £500m.

The figures for companies reflect a cautious spending assessment by a panel of experts under the chairmanship of Lord Zuckerman, formerly the Government's chief scientific adviser and trustee of the foundation.

Applications are to be assessed by a panel of experts under the chairmanship of Lord Zuckerman, formerly the Government's chief scientific adviser and trustee of the foundation.

SNOW REPORT

Depth (cm) of snow in 48 hours

SWITZERLAND: Grindelwald 60 128 Good

Garmisch 60 128 Good

Mittenwald 60 128 Good

SWITZERLAND: Zermatt 60 128 Good

St. Moritz 60 128 Good

DAISY: Chamonix 60 128 Good

Albertville 60 128 Good

Flaine 60 128 Good

Les Arcs 60 128 Good

Les Gets 60 128 Good

Les Menuires 60 128 Good

St. Anton 60 128 Good

Tignes 60 128 Good

Val d'Isere 60 128 Good

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Probably some snow but no proper areas snow-bound.

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HOME NEWS

Plessey announces 'major' investment programme

BY CHRISTOPHER LORENZ, ELECTRONICS CORRESPONDENT

Plessey Telecommunications yes activities at Beeston, Nottingham, went some way to out-ham, would be "enhanced" and lining its plans for the transition new work on the assembly and testing of electro-mechanical products testing of Pentex would be introduced to electronics by announcing a deal at Fleming Road, Speke, "major"—though unspecified—Merseyside.

investment programme which will start this year.

Included in the programme is the establishment at an existing factory in Chorley, Lancashire, of assembly and testing of the new TXE4 semi-electronic exchanges for the Post Office. Plessey at present has only one TXE4 plant, at Huyton on Merseyside.

The announcement also said that the Pioneer Works at Wigton, employing almost 500 people on electro-mechanical products would have to be closed by the middle of this year.

The closure forms part of the 2,000 jobs cut which Plessey announced in September after drastic cuts in Post Office orders.

Plessey said that it was accelerating the manufacture of electronic technologies... in order to take advantage of the design and manufacture of electronic products.

These products are far less labour intensive than electro-mechanical designs, especially in the high-volume telephone exchange sector.

Plessey told the unions before Christmas that there would be no more redundancies in the medium term—which is taken to mean until at least the summer—provided that there was no change in circumstances.

However, it will be considered an extraordinary feat if this applies throughout the next two years.

Our Wigan Correspondent reports: After a meeting with Plessey management at the Wigan plant, the joint shop stewards committee pledged to fight "tooth and nail" to stop the closure.

Mr. Derek Keen, the works convenor, said that management had still not explained why they had "picked on" the Pioneer Works. "We have evidence that the factory is a profit-making concern."

Mr. Alan Fitch, MP for Wigan, has said he is ready to act immediately to try to avert the closure.

Like all the Post Office's telecommunications suppliers, Plessey is facing a difficult period of labour relations, with short-term cuts in Post Office orders exacerbating the long-term rundown in employment as it gradually converts to the design and manufacture of electronic products.

The death of a supertanker by its two survivors

FINANCIAL TIMES REPORTER

THE NORWEGIAN supertanker but the markings on the dark second survivor, 39-year-old Esteban Teruel, were still visible.

The two, both from Tenerife in the Canary Islands, drifted for 19 days, living off fish and rainwater. Both were in good condition when they were finally spotted.

The Japanese fishing vessel which rescued them was heading last night for the Palau group of islands east of the Philippines, where the survivors were to be transferred to an American Air Force jet and flown to Okinawa.

Scottish Conservative MPs last night agreed unanimously to urge the Scottish Secretary to appoint a committee of inquiry into Glasgow's affairs.

The search for further survivors continued yesterday but without success.

One aircraft reported sighting an empty lifeboat near where managed to reach a lifeboat final.

The two Spaniards were rescued nearby, and pulled in the

water and the Berge Istra sank within a minute. The crew could not be dis-

tinguished.

Speaking through an inter-

com, Leon said he was

painting on the tanker's deck

survivors. Leon said he was

alive and well.

The two Spaniards were also

alive and well.

HOME NEWS

Iceland Premier's visit raises little optimism

MALCOLM RUTHERFORD IN LONDON AND JON MAGNUSSON IN REYKJAVIK

SEIR HALLGRIMSSON, the Icelandic Prime Minister, has invited to visit Britain for the weekend, but there is no optimism on either side about the cod war, possibly because the two sides are still far apart and that the order to the three Navy frigates to withdraw went out all yesterday morning.

Britain's hopes are based partly on the assessment of Dr. Joseph Luns, the NATO Secretary-General, who visited Reykjavik last week, and partly on the precedent of the previous cod war in 1972-73 when a similar arrangement was honoured by the Icelanders.

The three Royal Navy frigates, with a naval tug and a supply ship, sailed out of the claimed 12-mile limit last night, leaving 145 British trawlers protected for the past two weeks. It is becoming clear the UK government has received no specific assurance that Icelandic trawlers will be allowed to return.

Roy Hattersley, Minister of State at the Foreign Office, said in the House of Commons only the hoped and expected this to be the case. Even if the harassment is over, however, it is clear that the two

BP, National join petrol price war

BY RAY DAFTER, ENERGY CORRESPONDENT

BRITISH PETROLEUM and all part of the Shell-Mex and BP National Benzole have joined in marketing organisation.

ALTHOUGH VICTIMS of overbooking by UK airlines will receive mandatory compensation under a scheme planned by the Civil Aviation Authority, there is no way of enforcing such a system on foreign airlines operating to and from this country.

The Government will be urging those foreign airlines to adopt voluntarily similar measures to those applicable to British air lines.

Lord Winterbottom, the Government's spokesman on trade matters in the House, told the House that the CAA's scheme was being discussed with the airlines.

When introduced, it would probably take the form of an agreement by the airline's operating certificates issued by the CAA, providing for such compensation when overbooking occurred and resulting in passengers being off-loaded.

Lord Shepherd, Leader of the House, suggested that the issue could be raised again later when all the issues involved could be aired with full explanations.

The CAA's decision to introduce a mandatory scheme of compensation for passengers overbooked and subsequently off-loaded from specific flights followed a ruling by the Lords.

Final details of products included in the package, however, may not be officially released until next month.

CBI urged to back broad principles of prices scheme

BY ELINOR GOODMAN, CONSUMER AFFAIRS CORRESPONDENT

THE NEGOTIATING team of the Confederation of British Industries still have to be set up. This is partly because some industry will recommend to its particularly among the numerous lead members — and partly because the Government wants the scheme to have maximum publicity when it is launched in the city.

The scheme, which keeps to the general outline of proposals announced in summer to accompany wage restraint, will limit

the basic idea of restraining price rises on selected items to a maximum of 5 per cent. thought to have been retained.

Definitions of the 50 or so products to be covered, ranging from food to fuel, have, however, been tightened so as not to be so wide.

Companies taking part in the scheme will be allowed to recoup any extra costs from limiting price increases on the participating products to 5 per cent. by raising the price of products outside the scheme by more than normally allowed under the Price Code.

As a result of recent discussions with the Prices Department, manufacturers will be allowed to pull out of the scheme if they are faced with unexpected cost increases or significantly reduced margins.

New unit trust sales t lowest for years

CHRISTOPHER HILL

NEW investment in unit trusts has continued to decline for the year at £11.2m., in December, with £14.5m. in December. This reflected the decline in the total value of unit sales of approximately £5m., £7m., but the value of new sales also dropped by £14m., £6m.

Unit trust managers take the view that this is a normal seasonal fall in sales, and do not feel that it was unusual for June. They point to the repurchase figure, and say that the main influence for the month was the working month in December.

Unit trust managers take the view that interest in the new year period were those for the other of December, and this is to be the general experience. Christmas is usually a time ending rather than saving. An event this December was better than the previous when net new investment only £7m.

Value of funds increased by £4.7bn. to £25.1bn. in December, although the number of trust accounts fell from 2,193m. to 2,183m. than the number in December 1974.

THE LONG campaign by the Sunday Times to get ahead with serializing Richard Crossman's Diaries yesterday won the prize for Campaign of the Year from the Granite TV programme "What the Papers Say".

The newspaper was praised for its "genuine, daring editorial judgment and a great deal of plain cheek to own up to those on high to get parts of the diary suppressed."

Irish Press photographer Mr. Cyril Byrne, junior, won the Scoop of the Year award for his enterprise during the Monasterboice siege in the Irish Republic, at the end of last year.

Mr. Colin Welch, who started the Peter Simple column in the Daily Telegraph, and is now the newspaper's deputy editor and chief writer, was named Journalist of the Year for "a brilliant year's work in a career of brilliance."

Mr. John Edwards, of the Daily Mail, won the Reporter of the Year award for articles of great merit from the most unlikely spots.

The Columnist of the Year award went to Jon Akass of the Sun with the sales position.

IE CONTRACTS**Iarconi wins £8m.****Defence orders**

MICHAEL DONNE

A worth over £8m. has been awarded to MARCONI & DEFENCE SYSTEMS, member of the GEC-Marconi group, by the Ministry for the production of military systems at the Scottish factory at Fife.

Equipment includes the an VHF vehicle radio, an ed fire-control system for in tanks, and a one-hand cordless telephone board for battle units in Fife. Clansman is the standard radio for the Army. The new order is the latest series designed to ensure the Army is fully equipped with Clansman. It is trial overseas, and export are being negotiated.

An improved fire-control for the Chieftain is one of a number of computer developed by Marconi on the battlefield, involving a laser range-finder, using effective engagement static and moving targets 1 types of ammunition.

CLARKE CHAPMAN, Gateshead, has won an order worth more than £1.75m. for cladding the CECB's Littlebrook D power station under construction at Dartford, Kent. Carter Horsey Engineers, Crawley, part of Clarke Chapman's Horsey Pigott division, will supply fix and insulating cladding, roofing, patent glazing, ventilators, louvers and internal insulation for the boiler and turbine houses, electrical annexes and other buildings. Work is scheduled to begin in March and is expected to take two years and is being carried out as a sub-contract for Cleveland Bridge and Engineering Co. main structural steelwork contractors. Clarke Chapman's power plant division will supply the boilers for the district heating fed from a central boiler by underground mains station's three 650 MW(e) generating units.

ON FRIDAY, THERE WAS A DEBATE IN THE HOUSE OF COMMONS ON SMOKING AND HEALTH.

THE MINISTER OF STATE (HEALTH) ASKED FOR A STEADY REDUCTION IN CIGARETTES OF:-

1. TARYIELD

THE SILK CUT RANGE IS ALREADY:-

1. LOW IN TAR

*as defined by HM Government

2. CARBON MONOXIDE***2. LOW IN CARBON MONOXIDE****3. NICOTINE*****3. LOW IN NICOTINE**

*as defined by HM Government

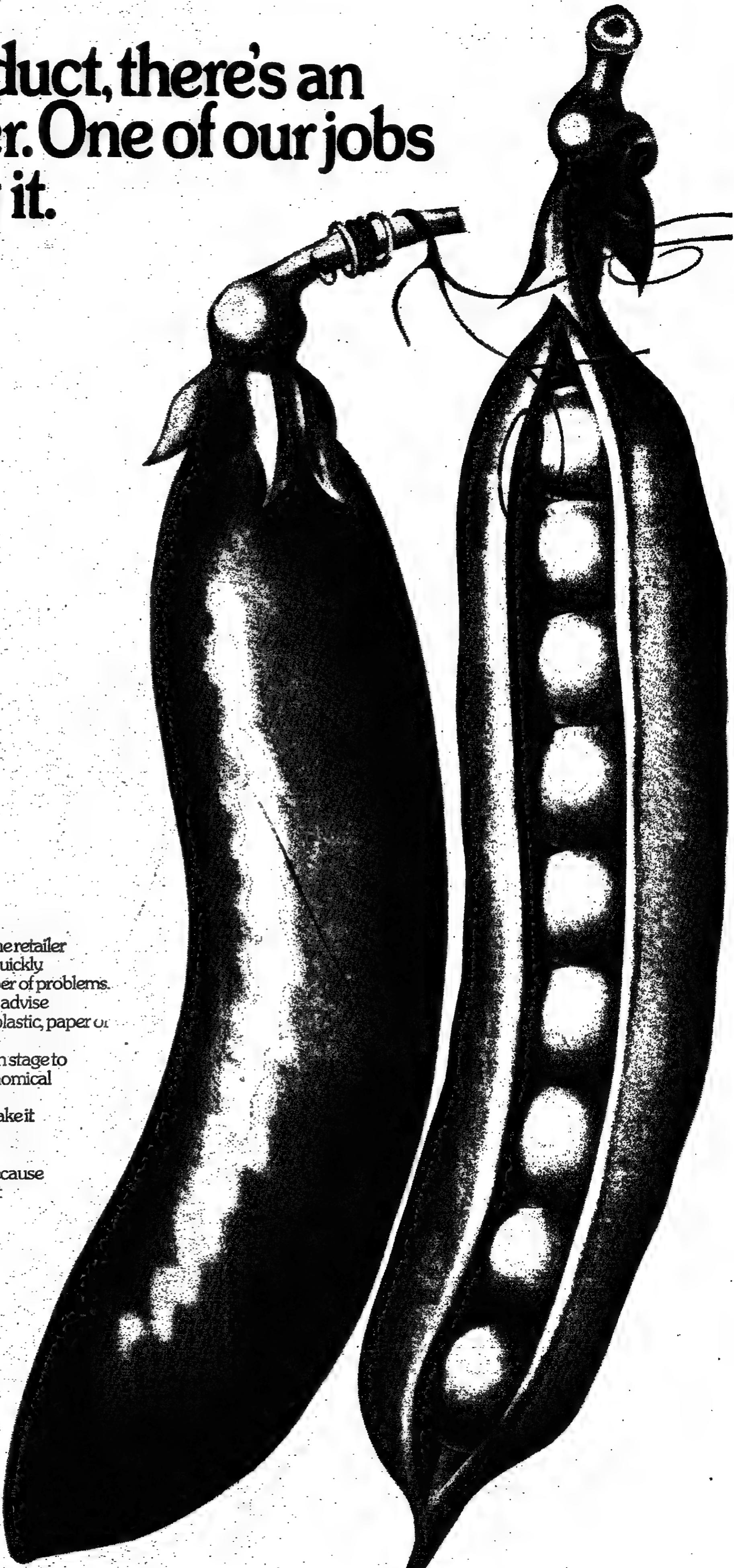
*Silk Cut has done all this through its special ventilated filter system, combined with specially selected tobaccos.



The mild cigarette.

LOW TAR As defined by H.M. Government
EVERY PACKET CARRIES A GOVERNMENT HEALTH WARNING

For every product, there's an ideal container. One of our jobs is discovering it.



The right container can get your product to the retailer economically and safely, and move it off his shelves quickly.

The wrong one can land you with any number of problems.

So an important part of Metal Box's job is to advise manufacturers on all forms of packaging in metal, plastic, paper or board from initial specification to pack design.

We can take a new product from formulation stage to production line; advising on the best and most economical existing container or devising a completely new one.

We can create and install the machinery to make it and the line to fill it; as well as providing complete technical and management back-up services.

And even when that's done, our job isn't—because we'll be able, thanks to ongoing research, to suggest modifications and improvements as techniques develop.

It's all part of the Metal Box service.

And it's all part of the professionalism that has made us Europe's largest manufacturer of containers and doubled our world sales (a third of which come from overseas) to 455 million in the past five years.



Metal Box Limited

PARLIAMENT



Jobless tide of anger swirls around Wilson

BY PHILIP RAWSTORNE

THE GOVERNMENT was engulfed yesterday in violent waves of anger that swept from the Labour benches in the wake of the unemployment figures. It overwhelmed the hapless Mr. Michael Foot who scarcely got his head above water again for 45 minutes. It broke so fiercely over Mr. Harold Wilson that even his natural buoyancy kept him afloat.

And, carrying the sympathy of Mr. Selwyn Lloyd, the Speaker, it threatened to drag Mr. Denis Healey, the Chancellor, into the Commons for a full-scale debate.

"The Labour movement is not going to stand for it much longer." Mr. Foot was sternly warned—and the warning was quickly passed to the Prime Minister as he took his seat.

With Mr. Foot by then totally swamped, Mr. Wilson advanced like some latter-day Canute to check the flood. "The whole House will regard these figures as extremely grave and serious," he declared.

"MPs will recognise," he added hopefully, "that this is happening in every advanced industrial country in the world."

But Mr. Norman Atkinson, the Left-wing MP for Tottenham, retorted that all that was clear was that the Socialist case for reflation was going by default. "There is a feeling of deep sadness . . . a great deal of disillusionment certainly on this side," he said bitterly.

And former Industry Minister, Mr. Eric Heffer, demanded that the PM should stop hiding behind the collapsing capitalist system. "That is no answer for a Socialist Government," he said. Genuine Socialist

He said that many young teachers coming into the profession had pacifist ideals and they were likely to be branded as soft-hearted if they did not approve of corporal punishment.

Such punishment was ineffective. It might lead to a temporary suspension of bad behaviour, but it could become counter-productive. "It may wonder that there is child battering and other forms of violence in our society," he added, to Conservative shouts of derision.

Mr. Cormack said that discipline was an essential part of teaching, and he regretted that Mr. Canavan should try to withdraw from the teaching profession a sanction "without which many of them could not carry out their job."

The teacher had to instil civilised values and a proper sense of order often into extremely rebellious children. He claimed that one reason for the "appallingly high level" of illiteracy was lack of discipline.

Mr. Cormack added that the Bill's proposals could only do destructive damage to the educational system and future countless millions of children.

MP loses Bill to ban corporal punishment

THE COMMONS yesterday rejected by 61 votes (151-120) a private members' Bill to abolish corporal punishment in schools.

Moving the Bill under the 10-minute rule, Mr. Denis Canavan (Lab. Stirlingshire W.), a teacher, said that corporal punishment had a brutalising effect on the pupil-teacher relationships rather than one of mutual respect. It could lead to sadism by the teacher and masochism by the pupil.

But, according to Mr. Patrick Cormack (C. Staffordshire S.W.), the Bill was "ludicrous, spurious, do-gooding nonsense." To his colleagues in Labour MPs he claimed there was something in the old adage "that if you spare the rod you spoil the child."

Mr. Canavan had described corporal punishment as "one of the last vestiges of a legalised form of violence in our society to-day."

He said that many young teachers coming into the profession had pacifist ideals and they were likely to be branded as soft-hearted if they did not approve of corporal punishment.

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Closed shop agreements

By John Hunt

THERE ARE now at least five public sector industries where union closed shop agreements for new entrants have either been agreed or firmly proposed. Mr. Michael Foot, Employment Secretary, told the Commons yesterday.

The industries concerned were mining, electricity, British Rail, British Gas and the Post Office, he told Mr. Ian Gow (C. Eastbourne).

Mr. Gow suggested that it was a serious affront to individual freedom to make it a precondition of employment that a person should belong to a union.

In reply, Mr. Foot said he appreciated that the establishment of the closed shop did raise questions of the rights of the individual as well as the trade union concerned. That was why the Government had discussed with the trade union movement the best way in which the system could be operated.

We believe the best and most effective way is to establish the tribunal which the TUC has proposed," he added. "The sooner we get that into operation the better it will be."

Seat belt proposals

WHEN THE Government seeks to introduce compulsory seat belts, children will not be allowed to ride in the front seat of cars unless they have a harness. Dr. John Gilbert, Transport Minister, said in a Commons written reply yesterday.

He said: "If Parliament grants power to make seat belt wearing compulsory, I shall seek to ensure that children ride in the back seats of cars unless protected by a harness."

Foot severely mauled as Left shows its fury

BY JOHN HUNT

MRS. MICHAEL FOOT, Employment Secretary, suffered the Government for its failure to worst mauled of his Ministerial career yesterday when for almost Mr. Foot split out to them the steps which the Government had already taken, they growled disconsolately that these were "only Tory measures."

Leading the onslaught, Mr. Eric Heffer (Lab. Walton) warned: "It is no use talking about it being deplorable. We now need some positive action on the part of this Government to bring unemployment down, otherwise the Labour movement in this country will not stand for it much longer."

In the medium term, he anticipated that inflationary measures would be introduced to improve the economy and one of the factors to be considered in this was import controls. Currently, he pinned his faith on the job creation programme to alleviate the worst hardships.

In noisy exchanges, the Conservatives called for his resignation and claimed that the Government was now reaping the whirlwind for having "let inflation rip" in order to win the last general election.

The Scottish Nationalists saw the rise in figures as further evidence of the price that Scotland was having to pay for centralised government from Westminster. The Liberals complained that the continual expression of regret which came from Mr. Foot month after month were no substitute for a policy.

But the most bitter attack of all came from Mr. Foot's own Left-wingers who demanded a crash programme of immediate refraction and the introduction of import controls to solve the problem.

A succession of Labour back

measures were needed—controls on imports and capital movements and a general resolution to provide more jobs.

Mr. Wilson shared their concern but not their conclusions. Grasping at the straws of economic statistics, he reassessed the Government's priorities of lowering inflation and raising exports and investment.

But it was the Conservatives who, rushing to ensure that he was thoroughly doused in the Labour protests, provided him instead with a lifeline. "The Labour Party is now becoming the natural party of unemployment," Mrs. Margaret Thatcher announced, diverting Labour's fury in her direction.

"These figures are due to the failure of your Government to handle the nation's economic affairs properly and, in particular, tackle the problem of inflation early enough," she declared.

Amid uproar, Mr. Wilson replied: "I totally reject that." Inflation and recession had been world wide, he said—and if he had followed Conservative advice in dealing with them, there would be even more jobless now.

To jeering from the Labour benches, Mrs. Thatcher rejoined: "There are no jobs now. You are the head of the Government which has the highest unemployment figures since the war. If you are not responsible will you please sack who-ever is."

"I did in the election of March, 1974, with the help of a few million votes," snapped Mr. Wilson, clambering gratefully, if temporarily, out of trouble.

Minister sets out Giro targets

By Justin Long,
Parliamentary Correspondent

PLANS TO enable the Post Office Giro to provide overdraft facilities and compete with the clearing banks was given a mixed reception in the Commons last night when the Government announced new financial targets for the proposed expanded service to Giro customers.

"The financial objective is that over the three years 1976-78, Giro will earn—after paying interest on its remaining loan capital an average annual return of 124 per cent. on its published dividend capital plus retained profits," Mr. Gregor MacKenzie, Minister of State, industry, told MPs.

This aim would call for a successively better performance from Giro during each of the three years in question, the Minister maintained when he rejected Tory criticisms of the Post Office (Banking Services) Bill which Mr. Michael Foot, Employment Secretary, told the Commons yesterday would come very soon.

Mr. Foot made it plain yesterday that he had no intention of dropping the Bill, which will reconstitute the National Dock Labour Board to stipulate that certain work within five miles of docks or waterways should be carried out by registered dockers only.

In addition, unions may want

LABOUR NEWS

Non-docker unions seek jobs scheme changes

BY JOHN HUNT AND CHRISTIAN TYLER

TRADE UNIONS waiting to protect their members from extension of the dock labour scheme, which the Government said yesterday is to go ahead, will meet at the TUC today to try to agree to a list of amendments to the Dockwork Regulation Bill.

Whether jointly or individually, the non-docker unions will demand certain exclusions as the price of recommending that their sponsored MP's vote for it. The MPs will be in touch with their unions for briefing after today's meeting of the TUC transport industries committee.

Demands

There will be moves at the TUC meeting to press the Minister to exclude some port jobs such as crane-driving and some inland work in warehouses and cold stores from the new definition of "dockwork."

In addition, unions may want a bigger say in deciding where and how the dock labour scheme is to be extended. As it stands, the Bill gives the power of

to the Minister to make a list of areas of influence or with members' jobs.

The NUR and TGWT virtually agreed a list of areas at separate meetings. The unions are still formulating amendments to the Bill, which will give Mr. Foot the power to

Ford craftsmen threaten to delay two new cars

BY ROY ROGERS, LABOUR CORRESPONDENT

SANCTIONS planned by shop union negotiators on the NJNC's 4,500 Ford Motor craftsmen has resulted in the erosion of craft differentials over the past few years.

The unofficial Ford National Skilled Craftsmen, which claims the support of 4,500 of the company's 5,000 craftsmen, has called a one-day strike on Feb. 1 unless its representation demands are met.

Ford management, which last night had not heard of the craftsmen's threat, sides with the skilled men and would like to see them with some additional representation.

It is particularly anxious that the representation now does not result in the winding-up of the NJNC and the advent of separate negotiations for skilled and production grades.

PRODUCTION at the largest of the British Leyland bus and truck factories at Leyland, Lancashire, was brought to a standstill when the 3,000 hourly-paid workers at the Spurrier Works

walked out in protest at disciplinary action against a colleague suspended for alleged bad time-keeping.

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The Executive's World

David Fishlock, FT Science Editor, sees a Wolfson Foundation move bringing

Glad tidings for research

A TIME when universities enduring a specially hard time from constraints on public funding news that another £2m. to be made available this year for research will gladden hearts of many academics. Wolfson Foundation has written to all vice-chancellors and principals informing them to put forward D-ideas for support.

The primary constraint is that research shall be "targeted," that is, at an ultimate economic payoff. This was the original basis on which, in late 1960s, Lord Zuckerman, chairman of the Wolfson Foundation, and his fellow trustees to put up £4m. to port a total of 60 research projects. It developed into a commitment to spend £6m. over a decade 1968-78.

It's pump priming—but we've shown that it works," says Lord Zuckerman, now the Government's chief scientific adviser. It began sense of his concern that far much UK university research was never transferred to industry or commerce. Too many dons even treated offers cash from industrial patrons "tainted" money and seemed projects that might be a useful outcome.

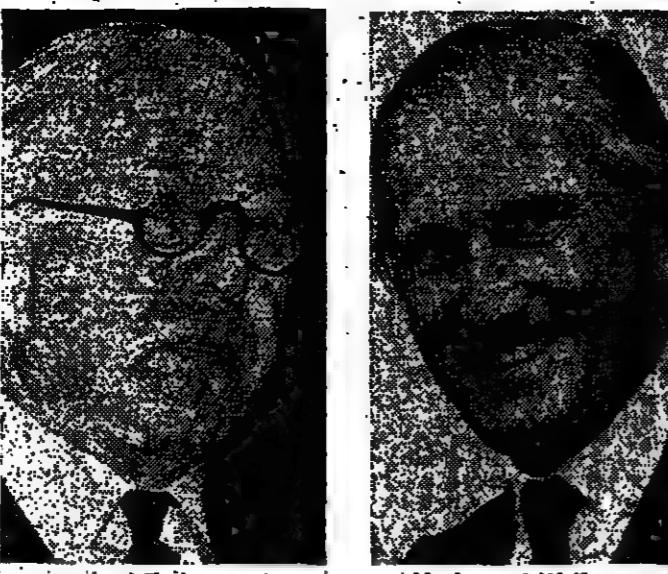
Appraisal

But an appraisal by Lord Zuckerman of the achievements a project he has directed since 1968 has convinced the trustees that it is working more successfully than they could reasonably have hoped. At the net he told them they would lucky if one in 20 of the research projects they backed aimed a substantial and early income return. In fact, they've done much better. Eight of the first 40 produced either industrial products or contracts for further research at industry's expense.

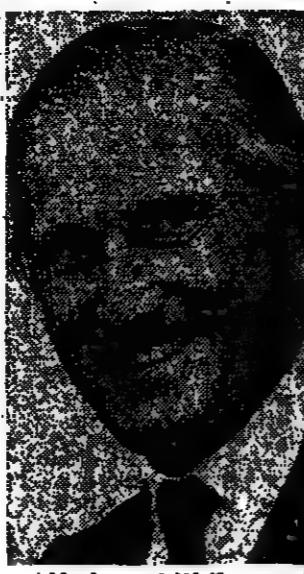
The most important thing to us out of his appraisal, loves Lord Zuckerman, is that as are being encouraged to use their research to deepen the prosperity of the industry. "And the shorter the delay, the better for them, the university and for the nation."

The way in which ideas are appraised have this much in common: the foundation aims to isolate the places where a small amount of cash might make a big difference to the project. At the outset the trustees decided that they would favour diversities which had made social efforts to establish close relationships with local industry.

How successful they have in might be judged from the gainer whose responsibility it is to seek out new ideas his



Lord Zuckerman



Mr. Leonard Wolfson

company might develop, who wrote to the Wolfson Foundation saying: "Wherever I have met a Wolfson unit the route into the university has been much simpler and more direct." The accompanying table summarises the Wolfson projects reckoned to have yielded an economic return. Judged most successful was the modest £20,000 a year invested in the four advisory units at the University of Southampton over the seven years 1968-75. The outcome for these "Wolfson services for industry" now running at £275,000 a year.

The biggest grant went to the University of Nottingham where the metallurgists set up the Wolfson Institute for Interfacial Technology. The grant included the cost of a new building. With the help of Professor John Morley, formerly a Rolls-Royce researcher, the unit has carried out a post mortem of the tragic failure of carbon fibre in the RB-211 project. This has led not only to a deeper understanding of failure mechanisms in the new composite materials but to patented "duplex" materials capable of absorbing immense amounts of energy without failing.

Anguish

At Edinburgh, the Wolfson Micro-electronics Liaison Unit ensured the anguish of seeing its chosen collaborator—the nascent Scottish electronics industry—suffer a bad time from overseas competition. But under a new director it fought its way back to become an established centre for contract research in solid-state electronics, at the profile shows.

Lord Zuckerman's appraisal produced other evidence of success than economic pay-off. In several cases closer links between university and industry had spawned other collaborative ventures on the campus. There were cases where research had been taken up in other departments of the university. Some projects had stimulated interest from government grant-giving bodies, so that the researchers found themselves involved in bigger projects.

The appraisal concluded that "success is built on success" that the successful projects were

WOLFSON UNIT PROJECTS WHICH HAVE LED TO A REAL ECONOMIC RETURN

University/ Department	Subject	Funding £	Return or potential return to Foundation
City: Chemistry Edinburgh Chemistry	Electrochemical technology; High-speed liquid chromatography for analysis	36,050 72,500	Patent rights taken out
Edinburgh: Electrical Engineering	Micro-electronics liaison unit (computer-aided design, etc.)	130,700	Patent rights being taken out
Exeter:	Electronics centre	33,000	—
Leeds: Colour Chemistry Newcastle: Mining Engineering	Organic Powders Research Unit (printing, etc.)	84,225	—
	Tunnel excavation	76,000	—
Nottingham: Metallurgy	Interfacial phenomena (new materials)	255,000	Patent rights taken out
Southampton: Faculty of Engineering and Applied Science	a. Industrial noise and vibration control unit	30,000	—
	b. Electronics	24,000	Two taken repayments
	c. Engineering Materials Advisory Service	50,000	—
	d. Marine craft advisory unit	16,500	—
	e. Applied Electrostatics Advisory Unit	24,000	—

how they did it, and directors through the transfer of existing technology to the many small industrial firms." They are wondering whether some new proposals for the new will have the gall—or the ideas round of grants, for which special consideration is to be given all "aimed at the rapid development of commercial projects

through the transfer of existing technology to the many small industrial firms."

By then it should have the the are wondering whether some new proposals for the new will have the gall—or the ideas round of grants, for which special consideration is to be given all "aimed at the rapid development of commercial projects

through the transfer of existing technology to the many small industrial firms."

in the companies' laboratories.

As Professor Farvis sees it, however, it is an educational experiment and not a rescue operation for industry—that would be far too presumptuous of us." It is an attempt to train the kind of people for which the new science-based industries of Scotland are looking.

Window

In fact the experiment almost came to grief early on, for two different reasons. One, beyond its control, was that the local companies on which it relied most for support were themselves in trouble. The other was that, initially, it chose materials research and advanced diagnostic services—the speciality of Professor Farvis's department—as the basis of its venture. This bridges the gap between its industrial clients and the work of the department itself (which is looking for anything upwards of three years ahead). The unit anticipates an income from research and design contracts exceeding £100,000 for the year ending March.

From the outset the plan recognised that "amateurs with virtually a business to go" need some expert guidance. So they recruited an advisory Board, under Professor Farvis, which included a number of prominent Scottish industrialists in electronics such as Dr. Melvyn Larkin, managing director of Moford, and Dr. Peter Kirby, research director of Welwyn Electric (who also became a visiting professor).

But the Wolfson "window" also enables companies to get to know the bright students. Students now spend time working on MOS circuits for its clients.

BUSINESS PROBLEMS

Capital gains tax and new shares

Last year I accepted 30 shares in damage to vehicles and the insurance cover. If any, held by the parties involved. We think that a full consideration would require oral discussion with your clients which indicates that a conference with counsel might best serve your purpose.

Your query raises complicated issues in the law of bailment in respect of which much will turn on the terms of employment of the employees, the terms on which the car park is made available for the employees, and the existence of the cash option will be ignored.

Under the new rules in the Finance (No. 2) Act 1975, the 1,050 shares would have been treated as having cost £50. The bonus shares will be treated like an ordinary bonus issue and the existence of the cash option will be ignored.

On the assumption that you are referring to companies resident in the UK, the answer is (a): the 1,050 shares will be treated as having cost £500. The bonus shares will be treated like an ordinary bonus issue and the existence of the cash option will be ignored.

Under the new rules in the Finance (No. 2) Act 1975, the 1,050 shares would have been treated as having cost £50. Broadly speaking, the detailed rule is set out in paragraph 5 of schedule 8.

Copyright in music

I have a piece of music marked copyright which was composed by Greci with words by Sir Walter Scott. Surely it cannot be copyright. Could you tell me how copyright is in music works?

The copyright may exist in respect of the words, the music or the arrangement (or two or all of them). It does not follow that a claim to copyright can be substantiated, and the instance you give could turn out not to be protected by copyright. The duration of the English copyright is 50 years from the author's death, or first publication (if later).

Car park for employees

As solicitors we have at a client a company which provides a car park for its employees. During the night shift there have been a series of break-ins into private vehicles on the car park, resulting

in

Small is beautiful

BY JOHN ARGENTI

NOT SO LONG ago the accent was all on growth and size. They may cease to trust you, margins, of course, but this is often easier said than done. The more useful play is to ensure that productivity rises at the same rate as sales volume. Thus, if it is hoped to sell 10 per cent.

more next year than this year, ways have to be devised to get this 10 per cent. more volume from approximately the same labour force, the same factory, the same transport and warehouse facilities, the same clerical and office staff—the same everything. If these productivities can only be increased by 7 per cent. next year then the sales increase will have to be held down to 7 per cent. (perhaps by increasing product selling prices and hence margins).

Strategy

The holding company wishing to adopt the stay-small strategy will presumably already have four or five subsidiary companies each employing less than 300 people rather than, say, two subsidiaries each employing 700 and no doubt each subsidiary will already be aiming to increase its profits but not its physical size.

But an additional route to extra profit available to the holding company that is not open to the single company is the formation of a new subsidiary every few years. The traditional method of identifying new business areas to enter is to search for markets that are expanding so that the infant company has a sporting chance of riding the wave. But that is not the key criterion for expansion under the stay-small strategy. Here, the key is whether it is possible to enter the proposed new business area and remain in it successfully in spite of being small. This does limit potential areas considerably although perhaps not as severely as might at first be thought. There remains considerable choice, among which may be listed any market that is segmented, markets that are limited geographically or legally or by some other factor, many service industries, activities involving low capital expenditure, retailing and so on.

John Argenti is a consultant in corporate strategy.

Stay-small strategists do say that some such threshold exists: most people would agree that crossing it calls for great care and skill from the proprietors: most people know that some of them come completely unstuck when trying to make the transition—but until recently hardly anyone would seriously suggest to a proprietor that he should not even try.

Stay-small strategists do say that the problems that have always been severe at this threshold have been made so much more severe by recent events that crossing it is no longer worth the risk. In fact, they go further: not only should one not try to cross it, one should deliberately do everything possible to avoid even approaching it.

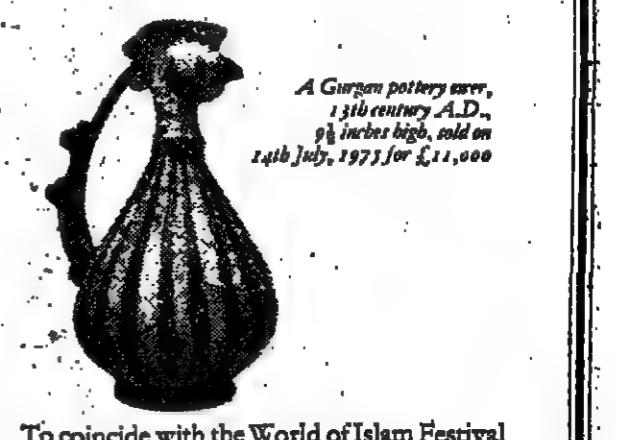
Critical mass

There are three clear signs that a company is approaching its critical mass. One is when the proprietor or founder has to employ someone to do almost everything he used to do himself. He probably used to do the selling, the invoicing, the typing—everything from sweeping the floor to raising a loan at the bank. When he finds that he spends nearly all day telling other people what to do instead of doing it himself, the Rubicon is not far away. At the same time he finds he has to adopt formal management systems, that have to be learnt, it seems, before one can make use of the stay-small strategy. The first concern single firms, second relates to holding companies.

The trick of making profits grow while the physical size of the company remains static can

SOTHEBY'S ISLAMIC WEEK

APRIL 12th to 15th 1976



A Gorgon pottery vessel, 13th century A.D., 9 inches high, sold on 14th July 1975 for £11,000

To coincide with the World of Islam Festival in London, Sotheby's will hold a special series of sales of Persian and other Islamic Antiquities, Miniatures, Lacquer, Carpets, Manuscripts and Paintings and Photographs of Middle Eastern interest.

Entries for these sales must arrive before February 12th

Enquiries for Antiquities should be made to Felicity Nicholson

Sotheby Parke-Bernet & Co., 34-35 New Bond Street, London W1A 2AA. Telephone: 01-493 8080. Telegrams: Abinitio, London. Telex: London 24414.

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How to weather it.

No2.

Robery Owen (Holdings) Co Ltd had a problem.

Downtime in the Cold Press Department by press operators waiting for machines to be reset or changed over to other components had swollen to as much as 100 hours per week. And that meant a lot of money wasted.

How did they weather it?

As many operators as possible were restrained to become setter/operators. Members of the operator staff were offered this training and 36 out of 45 volunteered. When only 20 had completed the course downtime was already reduced by 25%.

The benefits to Robery Owen (Holdings) Co Ltd have been these. Losses through downtime have been cut by £400 per operator per annum allowing for substantial gains by the upgraded setter/operators on their basic rates.

If there is any area in your business operation that you feel could benefit from a training scheme, contact the Industrial Training Board for your industry. Either direct or through the TSA.

TRAINING SERVICES AGENCY

An executive arm of the Manpower Services Commission.

One study prepared from information supplied by Robery Owen (Holdings) Co Ltd and the Engineering Industry Training Board.

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WEDNESDAY, JANUARY 21, 1976

Making haste slowly

THE LATEST unemployment figures in this as in most other industrialised countries, are undoubtedly dismal. To point out that they are not quite as dismal as a naive interpretation of the figures could make them appear not to suggest that the leaders of the TUC, for example, have not good reason to be concerned about the trend but to discourage them and their members from being pushed by the apparent size of the problem into demanding measures which would make the long-term situation even worse.

The way to make the figures look as bad as possible is to take the total number of people in the U.K. registered for unemployment benefit. This approach shows that the unemployment total rose by 219,000 to 1.43m between early December and early January, a figure which represents just over 8.1 per cent of the labour force. There is no questioning the fact that this number of people were registered as unemployed and were therefore suffering some degree of hardship. If one wishes to make use of these figures as an economic indicator, however, various adjustments are needed.

Upward trend

The figures which remain after these adjustments are themselves far from satisfactory as a measure of the real hardship caused by unemployment. But they do provide a more reliable guide to the trend of unemployment, and they show that—after the temporary upsurge last summer—the number of hard-core unemployed has continued to rise steadily at an annual rate of nearly half-a-million. The number of registered but unfilled job vacancies has at the same time continued steadily to fall.

There are a number of particular facts about the present pattern of unemployment which are interesting in themselves—the fact, for example, that although the unemployment rate is still only 3.7 per cent in the South East against 6.8 per cent in Wales and 5.1 per cent (seasonally adjusted) for the country as a whole, the recent rise in unemployment in the South East has been both in absolute and percentage

The need to bring forward industrial investment and thus avoid supply bottlenecks when the upturn comes was generally agreed at the NEDC last week. Adrian Hamilton and William Keegan examine the practical problems involved in achieving this aim

Fine tuning for Britain's investment accelerator

LAST week's National Economic Development Council meeting of industry and union leaders did not agree investment last year, a further on that much, but it did expect decline this year and unanimously accept the need to an upturn in 1977 which threatens to be too late to meet the predicted world-wide increase in demand. The Department of Industry's figures, produced earlier this month, reveal that capital expenditure by manufacturers fell 13 per cent last year and is likely to fall a further 5.8 per cent this year before rising some 13 per cent in 1977.

Some projects shelved

Analysis of the 1973 boom period shows that British industry was caught short in precisely this fashion in such vital areas as steel, castings, electric motors, specialist machine tools and diesel engines. In all these sectors, imports rose as a proportion of total deliveries. Surveys carried out by NEDO, and backed by evidence from the CBI, suggest that these same areas, and especially steel and castings, threaten to pose the same embarrassing difficulties on the next occasion. A CBI study shows there is an undoubted willingness in principle among some companies to go ahead with investment projects, but that cool appraisal of the cost often means that such projects are shelved.

It is to this point in particular that the Government has applied itself with the aid schemes announced over the past year. All three of the main types of bottleneck—shortages of capacity, shortages of skilled labour, and shortages of raw materials and components—have been covered. On the manpower side the Government has allocated an extra £70m. to the Manpower Services Commission to stimulate industrial training. On the stocks side the Treasury has made £70m. available to the British Steel Corporation to finance a steel stockpile and an extension of this to the private sector steel industry is being considered.

To meet the capacity problem, the Government last year introduced a new investment incentive under which £120m. has been made available so far for accelerated investment projects over and above the £110m. available for sectoral modernisation schemes in industries such as ferrous foundries, machine tools and shipbuilding.

The most interesting, and most novel aspect of this general aid is the accelerated

investment assistance. Contrary to the scheme and cyclical investment has been the long succession of lame ducks which the IDU has had the first time that a scheme to contend with. Yet there does seem to be some genuine cause for optimism. After a slow start—in which there were few applicants, and, as so often in the past, those with the awareness to apply were largely U.S.-owned companies—the scheme

—and in some cases low-interest loans—for new investment and modernisation projects which, for ten major projects, totalling £50m. can be proved, would otherwise around £220m. A further 50 projects are now under consideration. Where the scheme differs from traditional Government investment incentives is in its selectivity. Projects in any part of the country have to be undertaken by September this year at the latest. The aid is discretionary, and projects have to be reviewed by the Department of Industry's Industrial Development Unit in London (or its regional network); contrary to the popular impression, the decision as to whether a project is genuine and viable is not made by civil servants alone, but by both the CBI (staffed largely by seconded industrialists and bankers) and the Industrial Development Advisory Board, made up of eminent outsiders.

It is always difficult to judge the true success of Government aid schemes. Some of the aid of excitement at the Department of Industry now undoubtedly stems from the emotional contrast between the scheme and the long succession of lame ducks which the IDU has had the first time that a scheme to contend with. Yet there does seem to be some genuine cause for optimism. After a slow start—in which there were few applicants, and, as so often in the past, those with the awareness to apply were largely U.S.-owned companies—the scheme

is acknowledged to be already given to BSC to be examined and one with which there could tend to the private sector and be a bottleneck in supply during the upturn—exactly the kind of investment the Government is looking for.

So far the Government has achieved a ratio of between £5m. and £6m. advanced investment for every £1m. contributed by the State. What the Department is now looking for is the other major schemes of the Lucas type—perhaps in areas such as electric motors, where the fears of bottlenecks are great but companies have not yet applied. Ideally it would, quite apart from the opportunity to stockpiling schemes which seem to be emerging in the future.

More important, perhaps, than any "contra-cyclical" scheme, is the question of how far macro-economic intervention such as this can succeed if the macro-economic climate is against it. Memories of the overheating of the British economy during the 1973 boom are all too embarrassing. At the same time, a major part of industry's reluctance to invest during the troughs of the cycle in preparation for the peak stems simply from its long experience of how badly it can be caught out by the sudden shifts in Government policy forecasts considerably. Certainly, one senior Treasury official—a department which is traditionally hard-bitten about the effectiveness of Government assistance—says: "The scheme is genuinely contra-cyclical and we are only paying for the increment. It is giving us good returns for our money—the sort of instrument we have been searching for for years."

But the scheme cannot

itself provide the solution to the problem of bottlenecks.

Even now, after nearly a year

of operating, some large potential bottlenecks are looming for

1976 and 1977. Al-

though work has to be started by the autumn, most of the

investment will come on stream

well after the turning point of

the current business cycle.

Its Development Committee for

Mechanical Engineering Industry has still to be convinced

that the Government will get

the timing of its demand

management policies right,

as one purchasing director argued

when the subject was raised

by NEDO, the whole planning

structure of companies had too

frequently been undermined in

the past because of changes in

the national situation. As the

future looked likely to produce

even more problems this time

than in the past, so his procurement policies had equally had to be more circumspect.

Depressing report

This uncertainty still remains the key feature of corporate planning to-day, as shown by last week's very depressing report by the Economic Development Committee for Mechanical Engineering. Industry has still to be convinced that the Government will get the timing of its demand management policies right, that the public expenditure will be genuinely contra-cyclical and we are only paying for the increment. It is giving us good returns for our money—the sort of instrument we have been searching for for years."

Other contra-cyclical moves

brought under sufficient

such as more extensive assist-

ance for stockpiling materials,

which have been urged by NEDO,

are now not finding their

strength, for both the again as a result of investing

steel stockpiling finance too soon.

MEN AND MATTERS

Speaking of majorities

The official resignation of Selwyn Lloyd as Speaker of the House of Commons, announced yesterday to take effect from February 3, adds yet another complication to the tangled web surrounding the question of whether the Government does or does not have a majority in the House of Commons or will retain such majority as it may have.

First the official figures from the last election. There were 319 Labour MPs, 276 Conservatives, 12 Liberals, 11 Scots MPs, three Welsh MPs, and 13 others—which include Ulster members and a couple of genuine independents. Add all the others together and subtract from the Government and you had an overall majority of just three. Take out two Tories and one Labour (the Speaker and his two deputies) and the overall majority rises to four.

But one seat has changed hands. And effectively, although not constitutionally, the overall majority has been reduced to one due to chronic ill-health of two Labour back-benchers who have not attended the House for some weeks plus the absence of Robert Carr from the Tory benches. Further complications arise over two more Labour MPs—John Stonehouse and John Ryman—both of whom face court charges which make their political future uncertain. In fact, Ryman has said he will not vote in the House until his court case is over, and the effective overall majority is reduced to three.

The web gets even more confusing when forthcoming by-elections and the newly formed Scottish Labour Party are taken into account. The Tories are ahead of BST, raising a problem bound to hold Selwyn Lloyd's seat in the Wirral at the March by-election, and are equally com-

mitted of holding Carnforth, which became vacant on the elevation to the Peerage of Robert Carr. Among other elections pending they also believe they have a chance at Coventry North West.

That leaves two crucial issues so far as Labour is concerned. The first is whether the two backbenchers who have joined the Scottish Labour Party, Jim Sillars and John Robertson, decide to break away and fight the next election against official Labour candidates—which under Labour Party rules would disqualify them from membership of the official party.

The second issue is the gap created by Selwyn Lloyd's departure. Here it appears that the Government may get a lucky break since it looks as though the Tories will be prepared to put up another candidate for deputy Speaker—possibly Betty Harvie Anderson (Renfrew East)—rather than refusing to co-operate as they did in 1964 when the present Prime Minister was down to a majority of three.

Even so, who can still claim that the simple majority system leads to clear-cut Government?

Time out?

Concordes fly commercially to-day with it is hoped, earlier wrangles between the French and British about which of their respective aircrafts would be best for the future. However, time differences between the U.K. and France this year are in another respect making non-supersonic transport operators tear their hair as they try to draft intelligible schedules.

France has a daylight-impaired table wine clearance of 100,000 to 1. These include

Mid Glamorgan

Morganwg Ganol

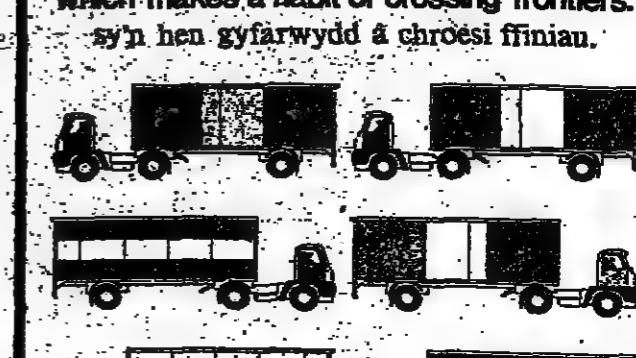
Glamorgan Centrale

Glamorgan du Centre

Mittel Glamorgan

Establish your factory in Mid Glamorgan. Set up your factory in Morganwg Ganol and join a growing international community at ymddywch a chymdeithas ryngwylodol gwyddol which makes a habit of crossing frontiers.

By 'n hen gyfarwydd a chroesi finianu.



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Mid Glamorgan COUNTY COUNCIL

Observer

Well noted

FINANCIAL TIMES SURVEY

Wednesday January 21 1976

Concorde

Much praised and much abused throughout its thirteen year development, Concorde still faces its greatest challenge as it goes into service today. Only by proving its social and economic acceptability on the world's major routes will it generate sales.

DAY'S ENTRY into service Concorde had landed at 83 airports with British Airports in 49 countries, and in all on fare-paying passenger more than 5m. miles were flown to Bahrain and with Air France.

Since on flights to Rio de Janeiro, it is a record that is a tribute to the British and French major turning point in the pro-manufacturers. In the course of its long and turbulent that flying which has continued story. It marks the end of since then both for purposes of a long period of gestation crew training, route proving, on design, through research, charter operations and development and production to start flights some 10,000 certification. During this time people, many of them among Concorde has demonstrated the most influential in their marketable capacity for survival almost perpetual just what the difference was between supersonic aviation and constant criticism over conventional subsonic travel. Virtually all of them admitted that the difference was dramatic, and that given the choice, they would "go supersonic" whenever possible.

It has always been argued by Concorde's protagonists that throughout history, whenever mankind has invented a faster way of getting from one place to another, it has generated its own market. This, it has been argued, was what Concorde was always intended to do, the raison d'être of the entire programme. Now, the testing time conducted by any civil airliner has come, and Concorde is out there in the world—the on its own in one of the eight Concordes participating in the most rigorous pieces of all—two prototypes, two pre-production aircraft, and four production aircraft, and four production aircraft had collected. The world's major airlines, now flown 5,542 hours by their governments, the rival certification date of December aircraft manufacturers, and the 1975—more than three times travelling public will all be much as the Boeing 747 looking to Concorde to prove its worth when it received its own Certificate of Airworthiness. Of those hours, more than France which total 100 and 100 had been at supersonic; the two governments and the media. The number of flights taxpayers who have imagined it is 2,478, of which 1,514 were personal missions, while an occasion to be, though to wrath, appears to have been of

suggest that this venture was centred. It is a fact that while being legal action—the environmentalists taking the U.S. Government has posed by the attitude of the U.S. Government, which has so far refused to grant permission for Concorde, and the U.K. and out of Heathrow, giving the aircraft to use any U.S. airports until at least the whole question of its impact upon the environment is still unable to operate on environment has been a period of considerable uncertainty. Either way, there is likely to be a period of considerable responsibility—along with the aircraft's noise, has also been involved in it—£25m. a time, other parts of the world. It is ington and New York, and a

Proving itself economically certain major air routes, such as the North Atlantic, and has two major public hearings into the light of the high price had to move with caution in this issue last year, in Washington and four by Air France, and a

It seems likely, therefore, that caution that has so far been displayed towards the Concorde by the world air transport industry.

Boon to mankind or a noisy nuisance?

By MICHAEL DONNE, Aerospace Correspondent

and the heavy research and only by its performance over further development cost of over the next few months that its ultimate acceptability will be judged. Now, the Department of Transportation is sifting all the well be able to demonstrate in to see how Concorde performs environmental, political and the passenger flights to Bahrain in passenger service before the aeronautics involved, and to Rio via Dakar that it is deciding whether or not to commit themselves.

Acceptability

This question of social acceptability is discussed in greater detail in this survey, but it is

But even if this decision is favourable, it does not seem likely that U.S. services will begin for a long time to come.

It is considered certain that

Probably the most severe test which ever side loses in this

The social criticism, which

Evaporated

The "options" placed by many of the long-haul airlines during the development phase have evaporated under these twin pressures of environmental objections and rising costs, so that today the order book is thin, with only five aircraft firmly contracted for by British Airways and four by Air France, with options or letters of intent for three each from Iran Air and the Civil Aviation Administration of China.

Neither of the latter are committed to buy, and so they must

of seats on each flight. This arrangement would enable some of them to get the benefit of being able to offer "Concorde service" to their own customers without the burden of buying the aeronautics. It is possible that the governments of those airlines may require this kind of collaboration as part of the first year or so of Concorde service, some of these long-haul operators who are

nothing better to influence the price they will exact for permitting Concorde to use either their airspace or their airports, even on a subsonic basis.

CONTINUED ON NEXT PAGE

Fly the future—fly the flag.

CONCORDE II

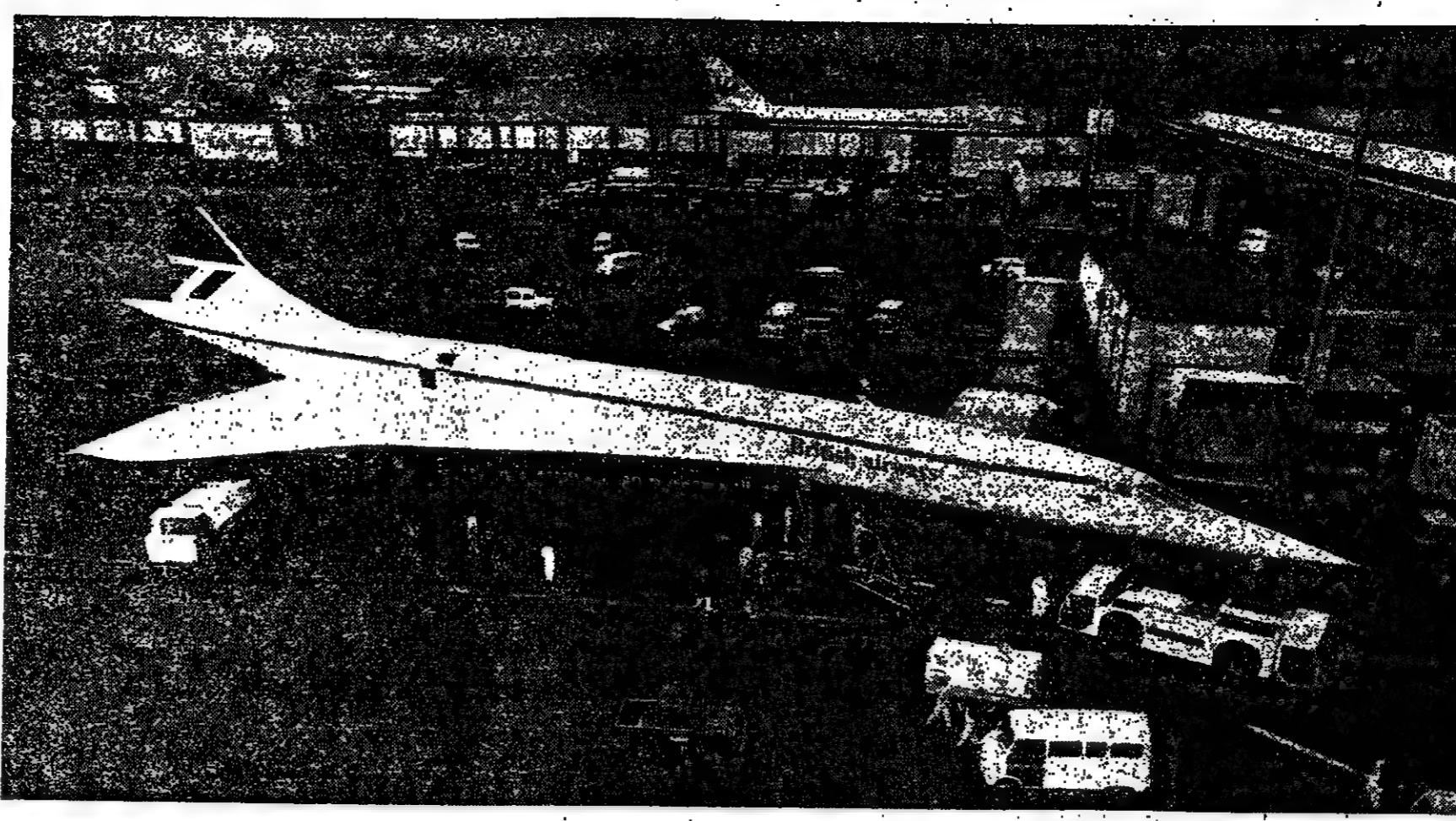
The introduction of Concorde has involved a great deal of planning by British Airways which has ordered five Concorde, with the second due for delivery in the spring.

THE BRITISH Airways flights to being trained, including 14 Bahrain that start to-day, at the pilots and seven flight engineers. same time as Air France begins preparations for Concorde flights to Rio de Janeiro, represent a new pinnacle of achievement in air travel. Not only will the passengers be flying faster than any fare-paying passengers have ever travelled before—at more than twice the speed of sound, or Mach 2.1 as it is called—they will be enjoying a standard of comfort and in flight cabin service that has rarely been matched.

BA itself is starting services with two flights a week to Bahrain, Mondays and Wednesdays with two flights back to London, on Tuesdays and Thursdays, all non-stop. The flights will leave Heathrow at 10.45 and arrive at Bahrain at 18.00 local time. They will leave Bahrain at 10.00 local, arriving at Heathrow at 11.20 local time. The journey time for the 3,515 miles will be just over 4 hours, travelling subsonically across Europe to the area of Trieste, then going supersonic down the Adriatic to the Mediterranean itself, past Crete, Rhodes and Cyprus to the coast of the Middle East, and then partly supersonic and partly subsonic across Lebanon, Syria and Jordan, Saudi Arabia and on to Bahrain in the Gulf.

So far, BA has taken delivery of one of the five Concorde it has ordered, with another due for delivery this spring. Its order is worth £150m, reckoning in all the spares and other associated equipment—including a new Concorde flight simulator—of most of the immediate interest which it has already paid some is centred on the transatlantic portation following the public hearing into Concorde in Washington on January 5.

The outcome of this review is



A British Airways Concorde on the ground at Heathrow.

the light of the review conducted by the Department of Transport, which it has already paid some is centred on the transatlantic portation following the public hearing into Concorde in Washington on January 5.

The outcome of this review is

promised by the U.S. DoT not recognised, for example, that those representing communities

before the whole matter is about the transatlantic situation cleared, and Concorde flights can proceed.

Equally, it is recognised that if the U.S. decision by Feb. 4 is anti-Concorde, some kind of diplomatic action will be inevitable by the U.K. and French Governments, in a bid to protect their rights under their bilateral air agreements with the U.S.

In such a case, too, there would be bound to be a long drawn out diplomatic wrangle, lasting several months.

Either way, therefore—as Mr. Davidson has already suggested—any Concorde to charge first-class fare plus transatlantic flights do not seem 20 per cent for the initial likely much before the end of this year, and may even have to wait until early 1977. This is, though, business will places added emphasis on the still be attracted to Concorde to acquisition of rights in the other parts of the world already mentioned, and it is certain that diplomatic activity in those directions will be stepped up in the coming months.

Mr. Davidson's second objective has been to provide the right timetables, so that the time the business executive saves by using Concorde he can usefully use. This means, for example, making it possible eventually to visit the U.S. and return to the U.K. within a day, if he wishes to do so. Timetables for the U.S. run, of course, must await the decision on whether or not services can start at all, but in the meantime some provisional planning is being done, to provide two return services a day with Concorde to New York and perhaps one return service to Washington.

The aim will be also to try to avoid leaving a Concorde on the ground unnecessarily for several hours—or even overnight—so that it may well be that through the medium of interline agreements, BA will be able to take Concorde on the past 20 years. There may be a third-class rate with no other places, such as meals service, and limited seating standards, a second-class

rate, equivalent to current economy-class, and a special "business" class at a fare higher than economy but still below first-class level, that would cater for those businessmen who could not afford Concorde rates but still wanted a reasonably higher standard of service than Concorde could provide. Whether this will happen, of course, depends entirely upon how Concorde performs in the services now starting.

Mr. Davidson's fourth objective has been to make sure that the service on the ground is right. "There is little point in flying at twice the speed of sound if the customer has long waits before departure, or the aircraft has a poor schedule-keeping reliability, or there are delays at the destination for customs clearance or baggage delivery," he says.

BA has already done much to achieve these aims. In the U.K., at Heathrow, "Concorde" road signs point to the new terminal check-in area inside Terminal Three, which is tastefully decorated, and provides a pleasant area in keeping with the ambience of Concorde. From the check-in area—where passengers will be able to check-in at a time much closer to departure than is normally the case—they will be taken to the waiting Concorde which will be at Gate 2, as close as possible to the check-in area.

Immigration

For returning passengers, there will be an ultra-fast baggage-unloading and delivery service to the Customs hall, where facilities have already been speeded by the provision of the "Green" "nothing to declare" Channel. Little can really be done to speed immigration facilities, which are required in law, but because of the comparatively small number of Concorde passengers less than 100 on average—the immigration delays should not be too difficult.

Finally, Mr. Davidson has stressed the importance of really superb cabin service and food. "Because of the shortness of the flights, we see no need for gorging feasts, but the meals are of the highest conceivable quality and that the very highest degree of individual passenger service is supplied." No fewer than 212,000 pieces of special Concorde tableware have been ordered from Royal Doulton, and cocktails will be served in high-quality "blown" glasses. A typical menu might be caviar, followed by breast of pheasant Souvignon, with endive, menuire, fresh asparagus, spears and Anna potatoes, followed by Concorde soufflé, cheese board and coffee, with aperitifs, wines and liqueurs.

A high degree of comfort combined with ultra-lightweight has been designed into the passenger seats, which recline for sleeping, have adjustable headrests and are wired to provide five programmes of in-flight stereo entertainment. At the front of both passenger cabins there is a "Machmeter" to inform passengers when they are flying faster than sound. This is the only indication that they will get as to when they are going through the sound barrier to supersonic speed.

As Mr. Davidson stresses: "We must never forget that exclusivity is part of the Concorde charter. It is very much an executive aircraft. It is specifically designed for that fairly small group of people to whom time really does mean money. And it represents remarkable value for money."

M.D.



To us, Concorde is just as much part of our history

Doncasters have been involved in aerospace development since its evolution. Forming and manipulating metals for compressor and turbine blades, casings, rings and innumerable components.

Spire, Comet, Lightning, Trident, Harrier, TriStar—famous names of which Concorde is the latest—are all history now to Doncasters and particularly the Turbine Products Division at Monk Bridge and Blaenavon. But Doncasters' sights are set on far horizons. Forgings in a new generation of super alloys are currently being assessed for tomorrow's engines.

Yet there are many other sides to Daniel

Doncaster besides forging for the aerospace industry.

The five other subsidiaries of Doncasters provide an equally vital forging and machining service in critical components, particularly to the automotive, heavy engineering, marine, offshore, oil and petrochemical processing industries. The shaping of high-stress parts for engines, transmission systems, pressure vessels and control systems, meanwhile, are the responsibility of Doncasters' other forges and specialist machining works.

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Boon

CONTINUED FROM PREVIOUS PAGE

Government may well now take more Concorde, might by now increased as part of the price the advice offered to it in the have been sold. It is still not to be paid for permitting past by a number of prominent to take this step, and if Concorde into their airspace. Some have bluntly said they do people in the airline and aero it is done over the next six space industry, and set up months, it might ensure the Concorde Leasing Corporation, additional orders that the pro that would contract for jet needs.

Rights

The negotiations for overflying and landing rights for Concorde have been extremely difficult in the past year or so, and some of them are continuing even as Concorde starts operations. This has stemmed from the fact that Concorde will quickly be able to show that it is recognized a powerful bargaining factor in their favour, and polluting monster that many have claimed it to be, but rather immediate benefit of the new. Some have sought additional another aeroplane—albeit of generation of aircraft. There is operating rights through the revolutionary design and performance why this same system U.K. some have suggested that Concorde—that is capable of cannot be applied to the existing payments under "pool fitting" into the existing world Concorde in the U.K.—indeed, agreements with the U.K. and air transport system with had it been so applied years ago. French airlines should be minimum of disruption.

CONCORDE III

For France Concorde has become the symbol of Gaullist insistence on independence from U.S. technological domination. There has been little criticism of the project.

France's stake

IN FRANCE Concorde has become the symbol of national pride. President Pompidou, like Jean-Jacques Servan-Schreiber, has been a leading figure in the foreign and industrial policy of French political and economic life. The former Conservative Prime Minister, Edward Heath, the former Conservative Prime Minister, has ever thought General de Gaulle came to be obliged to give M. Pompidou a firm undertaking that Britain would go ahead with the project before giving the green light to British membership of the Common Market.

Nor has there ever been any really effective opposition by the French public to Concorde. General Henri Ziegler, the former chairman of Aérospatiale, the French partners of the British Aircraft Corporation, was originally opposed to the project because he foresaw the difficulties of making Concorde profitable and of gaining the approval of the U.S. authorities for landing rights. M. Servan-Schreiber, too, waged a battle against the project. At all times, the French Government, on their newly-discovered sense of national strength, has been prepared to use strong diplomatic pressures to keep the project going. When the British Labour Government, was the British Labour Government, was a secondary concern two or three years after the conclusion of the Anglo-French agreement, was since the inception of the project showed signs of typically quixotic campaign against the aircraft. But they were crying in the wilderness.

The vast majority of French people, who have a greater tendency than the British to shut their eyes to William T. Coleman, the Transportation Secretary. But

taxes they pay and public spending, have been happy to espouse the cause of Concorde. There has been no real anti-Concorde campaign, nor has the media devoted anything like the space that British newspapers and television have done to airing the very real cost, financing and environmental problems involved.

It is hardly surprising, therefore, that most French people and not a few commentators look upon the obstacles which Concorde is faced with in the U.S. as a plot hatched by American aeronautical interests and politicians more concerned with their own electorate than international relations. Most of the officials and representatives of the French aircraft industry and Air France, who participated in the hearings in Washington, it is true, have privately expressed their appreciation of the manner in which the proceedings have been conducted.

French people, who have a greater tendency than the British to shut their eyes to William T. Coleman, the Transportation Secretary. But

the uninformed, who form the bulk of the population, are again up to their old tricks of trying to thwart French authorities and Air

The great question mark that remains is New York. The

French authorities and Air

France are fully prepared to initiate court proceedings against the New York Port

Authority if the Federal Aviation Authority approves landing

rights for Concorde in New

York and the local Port

Authority does not. It is

generally assumed in France

that such a case would

eventually be won by Britain

and France, and it is recognised

that the long delays caused by

the legal proceedings could be

very damaging for the whole

Concorde programme. As it is,

the whole affair could well escalate

into one of those destructive

French-American rows which

President Giscard has tried so

hard to avoid since coming to

power in the summer of 1974.

Optimistic

So far, however, France remains officially optimistic that all will come right in the end.

M. Giscard himself, has done his best to reassure public opinion by stating firmly that he would fly in Concorde when he pays his official visit to the U.S. in May. He could, of course, land at a military airport even if rights are refused in Washington and New York, but the general assumption is that he is confident of being able to land at Washington.

What most commentators here

fear is that some kind of political compromise will be found in the U.S. under which

landings will be authorised in Washington for a trial period of

six months, thus putting off the

final decision on landing rights until after the Presidential election in November. This

would mean a further delay in the French airline's that only

40 per cent of the Concorde

passengers on this route are

expected to be French and that

the ticket costs 20 per cent

more than an ordinary first-class

flight.

The first month of the service is already fully booked in advance and second month's reservations total 35 to 40 per cent of available seats, compared with normal advance service reserved for Concorde passengers will take them from the town air terminal to the French capital's space-age new airport, Roissy-Charles de Gaulle, where baggage-handling and customs checks have also been speeded up and simplified for their benefit.

One of the problems facing the French airline is that only

40 per cent of the Concorde

passengers on this route are

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more than an ordinary first-class

flight.

Although Air France has emphasised that it does not intend to treat the Concorde traveller as a "privileged" passenger, he will in practice be treated as such. A special bus service reserved for Concorde passengers will take them from the town air terminal to the French capital's space-age new airport, Roissy-Charles de Gaulle, where baggage-handling and customs checks have also been speeded up and simplified for their benefit.

Not the least of Air France's problems, as in the case of British Airways, has been the financing of the whole Concorde programme, particularly since

in Toulouse and Filton which it will have to pick up a considerable number from other Frs 400m. loss for 1975.

But when all is said and done, and even if Concorde turns out to be a commercial failure, it will forever stand as a monument to Anglo-French co-operation. An account by one of those responsible for the programme on the French side between 1963 and 1969, M. Jean Forestier, in the French magazine "Aviation Internationale," gives a harrowing insight into the national prejudices and interests which had to be overcome before the aircraft's first bolt was ever riveted into place.

That in spite of all these tensions and differences thousands of engineers, managers and technicians from the two countries were able to produce a plane which, whatever its drawbacks, marks a technological revolution, must surely be considered as one of Concorde's greatest achievements.

Robert Mauthner
Paris Correspondent

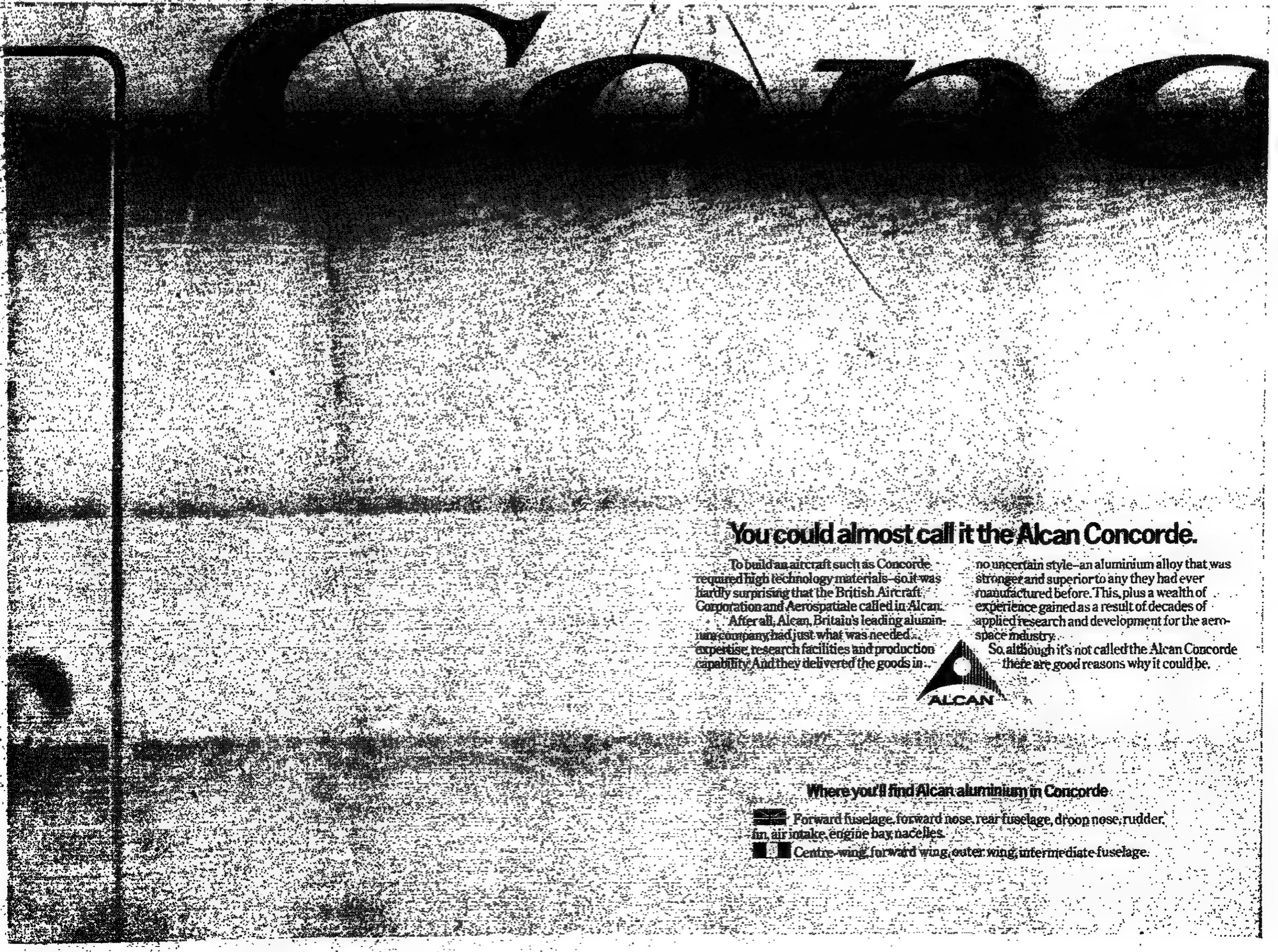
MILESTONES ON THE SUPERSONIC ROAD

Start of supersonic airliner research in Europe.	1973, September 29	02 Lands at Dallas/Ft. Worth to commence first visit to the U.S.
Feasibility and design studies.	1973, December 6	First production Concorde flies from Toulouse.
Preliminary British/French discussions.	1974, February 12	Second production Concorde flies from Filton.
British and French Governments sign agreement covering the joint design, development and manufacture of an SST.	1974, February	Cold weather trials carried out in Fairbanks, Alaska, by 02.
Roll-out of first prototype at Toulouse.	1974, June 14	First supersonic flight over a U.S. domestic route—between Boston and Miami.
First flight of Concorde 002 from Filton.	1974, June 17	First double crossing of the North Atlantic.
Concorde's first supersonic flight.	1974, August 7	Second production Concorde visits Persian Gulf and Singapore for hot weather trials.
Mach 3 exceeded for first time by 001.	September 3	001 flies 2,800 statute miles to Dakar in 2 hrs. 35 mins. on first overseas flight, halving subsonic times.
Concorde makes first automatic landings.	1975, July 7	Development flying programme begins as part of process towards award of Certificate of Airworthiness.
001 flies 2,800 statute miles to Dakar in 2 hrs. 35 mins. on first overseas flight, halving subsonic times.	1975, October 9	French Government awards Concorde its Certificate of Airworthiness.
002 visits Australia, Middle and Far East.	1975, December 5	U.K. Civil Aviation Authority awards Concorde its Certificate of Airworthiness.
British Airways orders five Concorde and Air France four.	1976, January 15	First Concorde delivered to Air France.
Iran Air signs an initial purchase agreement for two Concorde and an option for a third.	1976, January 21	British Airways takes delivery of its first Concorde.
002—the second pre-production Concorde, and the fourth to be built for the first flight from Toulouse.		British Airways and Air France start fare-paying passenger services.

SUPersonic AIRLINERS—THE BASIC FACTS

	Anglo-French	Soviet Union
Speed	Mach 2.05 (1,354 mph)	Mach 2.2 (1,430 mph)
Range	4,000 miles	4,000 miles
Payload	100-128 passengers (approx.)	up to 140 passengers
Engines	Four Rolls-Royce (Bristol) Olympus 593s	Four Kuznetsov NK-144s
Max. Take-off	400,000 lbs	396,330 lbs
Weight		
Estimated	£20m-plus (depending on spares and equipment installation)	Not available
Price		

Source: Jane's All The World's Aircraft, 1975-76, BAC & Aérospatiale.



You could almost call it the Alcan Concorde.

To build an aircraft such as Concorde required high technology materials—so it was hardly surprising that the British Aircraft Corporation and Aérospatiale called in Alcan.

After all, Alcan, Britain's leading aluminum company had just what was needed—expertise, research facilities and production capability. And they delivered the goods in

no uncertain style—an aluminium alloy that was stronger and superior to any they had ever manufactured before. This, plus a wealth of experience gained as a result of decades of applied research and development for the aerospace industry.

So, although it's not called the Alcan Concorde there are good reasons why it could be.



Where you'll find Alcan aluminum in Concorde

Forward fuselage, forward nose, rear fuselage, droop nose, rudder, air intake, engine bay nacelles.

Centre-wing, forward wing, outer wing, intermediate fuselage.

CONCORDE VI

While debate in the U.S. has ranged wide over Concorde, the key issue is whether it will be allowed to land at New York's Kennedy Airport. Environmental rather than national aspects have been at the forefront.

IF ANY one factor has cast a cloud over the introduction of Concorde into the U.S. next decade, it is that the Anglo-French aircraft will not be able to land at New York on the route against U.S. manufacturers if it was originally intended to be banned. It would be clear discrimination if step in Concorde's history even generated, its opponents have taken the opposite view and it is not a conclusive one. He is well aware that whatever it develops itself as a major centre of aviation in the growing south west of the U.S. Dallas Airport officials see Concorde as attracting feeder traffic from a wide area, which would greatly increase the airport's attractiveness as an aviation switching centre for the area.

But such speculation is for mistakes in its evidence about the aircraft's noise. But while there are a number of airports away from major population centres specifically because of this means that on very hot days Concorde may have to fly supersonic aircraft in g to receive Concorde. In particular the giant new airport at Dallas-Fort Worth would be happy to have Concorde to help Dallas but not Kennedy, Dallas could itself become an increasingly important switching centre, with aircraft stopping at Dulles to feed transatlantic passengers on to Concorde.

Instead the aircraft is still in the long debate about Frenchmen involved in the cannot satisfy everyone. He

supersonic aircraft which began project do not think that the must choose between the Scylla

when the U.S. was planning its issue is being decided on of allowing the aircraft into

own SST and has continued nationalistic grounds. Rather New York and profoundly

intermittently here ever since, they concede that environmental irritations thousands of people

The hearings which were held issues have become steadily irritating near Kennedy Airport

in Washington earlier this more important and that the and the Charybdis of angering

month are the latest in a long U.S. having banned its own two of America's closest allies

line of reports, investigations supersonic aircraft, cannot really

and congressional inquiries are accused of having one law for

about supersonic flight. Itself and another for foreigners

And even if the Secretary of Transportation, Mr. William Coleman, decides to allow the observers who believe that aircraft to land—and he must sooner or later the U.S. must make a decision within a month build its own SST. They point out of the wood. Apart from the Douglas, which are still keeping attempts which will almost certainly then be mounted in Concorde's SST technology, and gress to stop it there are likely they believe that U.S. committee to be challenges in court, particularly in New York, where environmental and citizens actions panels may be hoping that Concorde will be banned from the U.S. and that its commercial groups are already preparing viability may thus be critically cases to be advanced if necessary. Then, so the argument runs, they will have been made by both sides.

For Concorde's makers, and able to step in and develop their own SST, which would be a took the unusual step of publicly criticising a U.S. Government agency for what it called

Ozone layer

The arguments against the aircraft have centred on its noise and, to a lesser extent, on the possible depletion of the ozone layer for which it may be responsible. The debate about the noise is a complicated one, involving different standards of measurement, largely subjective assessments of individual noise nuisance and comparisons of noise with that made by other types of aircraft.

At the hearings it was clear that Mr. Coleman listened closest to the evidence about noise and that he was particularly impressed by the volume and intensity of opposition from New York on the subject. Certainly it is difficult to find any politician in New York who has a good word to say for the aircraft.

But away from the east coast was specifically built a long way to Dulles. While it is well do not apply to entire away from major population within existing safety margins situations such as the or aircraft noise. This airport—Dulles—is currently underused, with a significant number of France and Britain empty seats if it is to get to argued that indeed there Mr. Coleman compromises and Dulles safely. This problem rules at all which ap allows Concorde to land at Dulles but not Kennedy, Dulles does not of itself make very that the U.S. has no leg to press by this argument, who is a profession, was cleared though lawyers for gro

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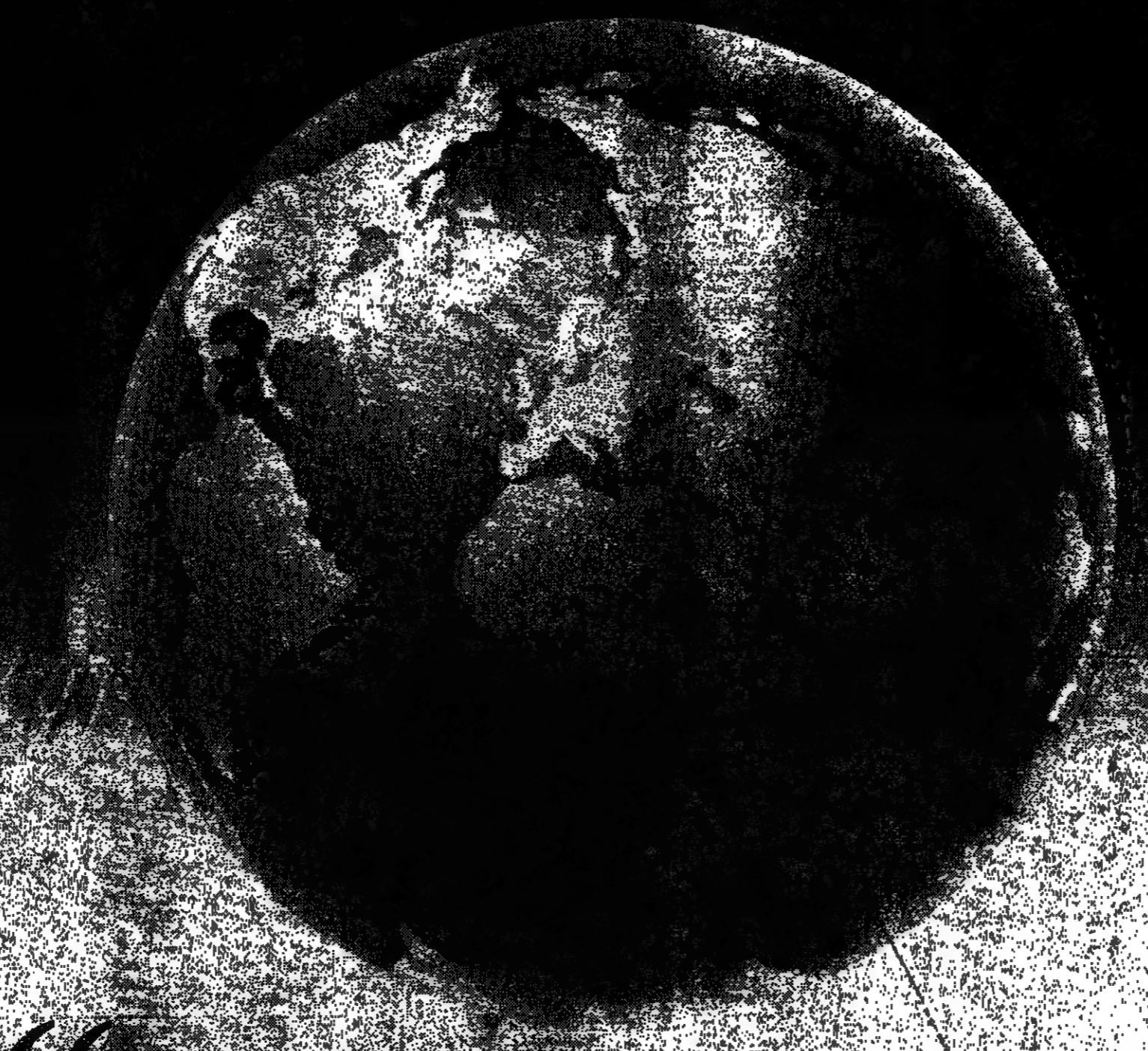
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Well noted

Bland Payne in support of British technological flair



“ Insuring big developments is a job for big brokers. Insuring technologically advanced developments from their start is a job for real experts.

In Bland Payne we are proud to have provided stage by stage background support to the Concorde project. ”

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Sackville House, Fenchurch Street, London EC3M 6BN 01-623 8080

CONCORDE VIII

The engine which powers the airliner—the Olympus 593—is the most extensively tested engine ever to enter airline service, and is the fruit of 25 years of painstaking development.

THE CONCEPT of a supersonic for the bench and flight-larger than earlier versions, airliner from the start development programmes have became available for testing in 1965. It depended upon the availability of an aero-engine which could meet the extremely exacting new requirement—that of operating for long periods at speeds faster than that of sound during normal cruising flight. The choice of a suitable candidate finally settled on the Bristol Siddeley Olympus (that company subsequently becoming part of Rolls-Royce) around 1960, when the detailed studies of a possible supersonic airliner were under way in Britain and France. The Olympus had been developed initially for military use, and powered a number of aircraft, including the Vulcan V-bomber and the TSR-2 tactical-strike-reconnaissance aircraft. Its subsequent evolution into the Olympus 593 for Concorde has been the work of Rolls-Royce (1971) and Snecma (Société Nationale d'Etude et de Construction de Moteurs d'Aviation) of France, with the work broadly being shared with 60 per cent carried out by the U.K. company and 40 per cent in France.

Explored

For the Concorde application, however, new areas of technology had to be explored, due mainly to the fact that a supersonic power unit operates in a far more arduous environment than a conventional subsonic engine. Operating temperatures, for example, are higher, creating the need to use special heat resistant materials and other measures.

The engine, on which test experience now exceeds 50,000 hours with more than 25,000 hours airborne in Concorde (more than 1,500 hours at supersonic speeds), has been awarded a full passenger-carrying Type Certificate, the first ever issued for a civil supersonic aero-engine.

More than 110 engines have been produced, and deliveries

Envisaged

Flight testing of the engine continued on a Vulcan test bed until the prototype Concorde flights in early 1969. Although the original 3B was a completely adequate engine for Concorde operation, changes were already envisaged which would improve its fuel consumption and general performance.

The designers were especially keen to reduce the take-off

noise and smoke, which had begun to cause public concern during the prototype flight trials.

The engines which were used

for the first pre-production

Concorde (aircraft 01) had a

fuel pumping system which was

lighter than previous systems

and gave greater combustion

efficiency, thus improving the

fuel economy of the engine and

reducing smoke at take-off.

Substantial efforts have also

been made on the problem of

getting the engine noise levels

down. These have been success-

ful to the extent that the noise

of the "civil Olympus" for

and the lowest level of noise,

Concorde is much lower than

that of the military Olympus

from which it was derived. The

manufacturers now claim that

Concorde's noise levels at take-

off and landing are no worse

than those of the current

high temperatures without the

generation of subsonic Boeing

707, Douglas DC-8 and BAC

while maintaining acceptable

fuel burning efficiency. Per-

haps as remarkable as any of

those who are arguing that even this

is unacceptable, in the light of the

Bristol design for an electronic

control system capable of co-

ordinating the many engine engines for the new-generation

functions which would be the

aim of "wide-bodied" airliners, and

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CONCORDE IX

Concorde is the most thoroughly tested aircraft ever to enter service. An operating life of 45,000 hours specified early in development has meant a huge task for the manufacturers. Both at Toulouse and Farnborough the various pressures to be experienced during a complete Concorde "flight cycle" were simulated. Much new technology has resulted from the tests.

Intensive ground testing

WHEN IT was agreed between the British and French civil aviation authorities that the airworthiness standard required for supersonic airliners should be a "life" of 45,000 hours, including some 25,000 hours of operation at the very high temperatures experienced at speeds faster than that of sound, they could never have fully appreciated the size and severity of the task they were setting the Concorde manufacturers.

The development of the materials to withstand such conditions, the techniques used to transform them into the finished aircraft, and the intense testing which has taken place on the ground at every step of the long production process since the inception of Concorde, illustrate the extent of the technical achievement that comes to fruition to-day with the start of fare-paying passenger services. Broadly, this ground testing began, involving two com-

plete Concorde airframes—one for static testing (that is, determining the structural integrity of the Concorde) and the other for fatigue testing (that is, determining its safe "in-service life").

The static testing programme has been carried out by the French, at the big test centre of CEAT at Toulouse. The fatigue test programme is being carried out at a specially-constructed facility at the Royal Aircraft Establishment, Farnborough. The aim in each case is to simulate on the ground all the various pressures to which a Concorde will be subjected during a complete "flight cycle," from engines on, taxiing, take-off, climb, supersonic cruise, descent, landing, taxiing and engines off.

As a result, it is hoped to prove that the "safe life" of a Concorde in airline service will be in fact substantially greater than any Concorde will ever in practice be expected to fly. The basic design objective, in effect, is an airframe "life" of about 45,000 hours of flying, or more than 24,000 separate test flights. On the assumption of an average utilisation of 3,000 hours of flying a year, this would give Concorde an in-service life of about 15 years, although in practice the test programme is intended to extend this as much as possible.

By the time the Concorde was awarded its Certificate of Airworthiness late last year, a total of nearly 7,000 simulated "flights" had been achieved, and it is intended that even after entry into service, this test programme will continue, averaging 7,000 simulated flights a year, or about two to three times as much as any individual Concorde in fact will be expected annually to make.

In this way, the test programme will always be keeping the Concorde's "slender delta wing" shape, has involved more than 4,000 hours of testing in subsonic, transonic and supersonic wind tunnels. The aircraft's flying-control system, with its associated undercarriage, hydraulic and electrical systems, have been tested on a special rig that has embodied a complete replica of this complex array of controls.

Similarly, a complete reproduction of the aircraft's fuel system was built, mounted on a platform that could be moved to simulate the attitudes of the aircraft in flight. Excessive impact, fatigue and static strength tests have been made on the undercarriage, tyres and brakes, going beyond the forces that these parts of the aircraft will be expected to endure in airline service. Two full-scale test rigs have been built for electrical testing, one reproducing the electrical generating system, and the other the electrical distribution system.

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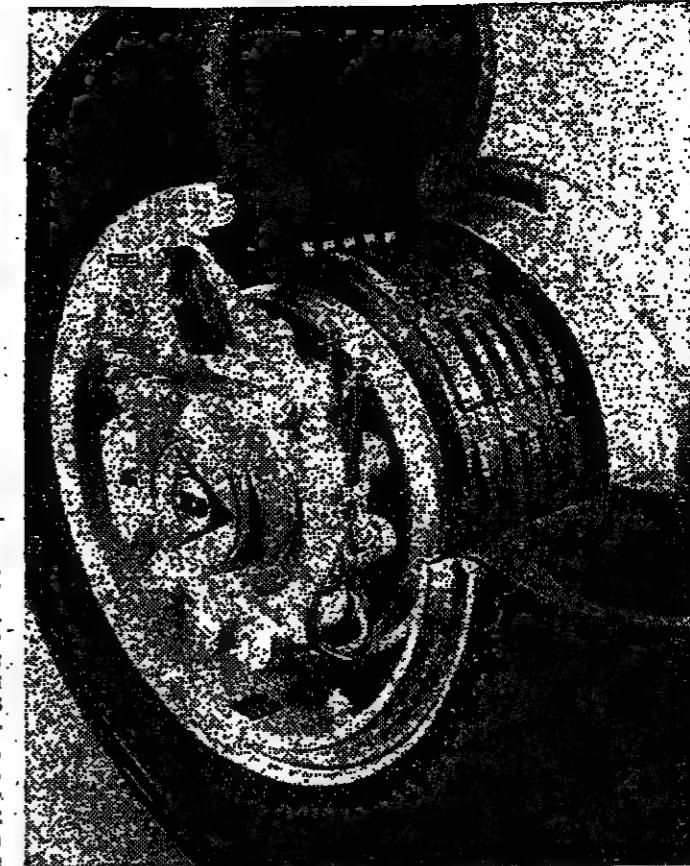
set up thermal stresses due to to show that the structure is capable of withstanding damage or failures in service.

During cruising flight the internal structure temperature of the Concorde flying programme are will gradually approach that of the aircraft has been so good because of the enormous thermal stresses will ease. The engineers involved with the Concorde are "systems aircraft" dependent upon all its myriad fatigue loading action and its deep structures can give rise to significant stresses. Accordingly, they have to be very carefully calculated if Concorde is to be a thoroughly safe aircraft. As a result actual components of the Concorde—such as parts of the wing and fuselage—have been made and tested specifically to help in the design development of the aircraft.

The test programme itself has produced much new technology and equipment, such as the unit used to test systems on board the aircraft, and this is likely to be applied to other fields—to the financial benefit of the manufacturers. There has also been some interest in process-control systems, which could be applied to the oil or chemical industries.

In fact, the enormous test experience built up in the manufacture of Concorde, is part of the overall "technological spin-off" that may well be useful in other directions in future. With knowledge in this area far ahead of most other aerospace competitors, it is felt that the advantage should not be lost.

L.B.



A section through a tyre and wheel showing the structural carbon brakes which fit into the 22 in. wheel.

Acoustic

"Fail-safe" tests have also been carried out to demonstrate the crack characteristics of the aircraft's structure and its residual strength. Acoustic tests have been done to investigate the effects on the structure of engine noise and various pressure fluctuation effects in the air flow.

One of the most important of the thermal effects created by supersonic flight is the "thermal stress distributions under various design conditions; static tests to demonstrate the strength of the structure under extreme temperature conditions; fatigue tests to show their behaviour under the recurring loads encountered in air service, and fail-safe tests

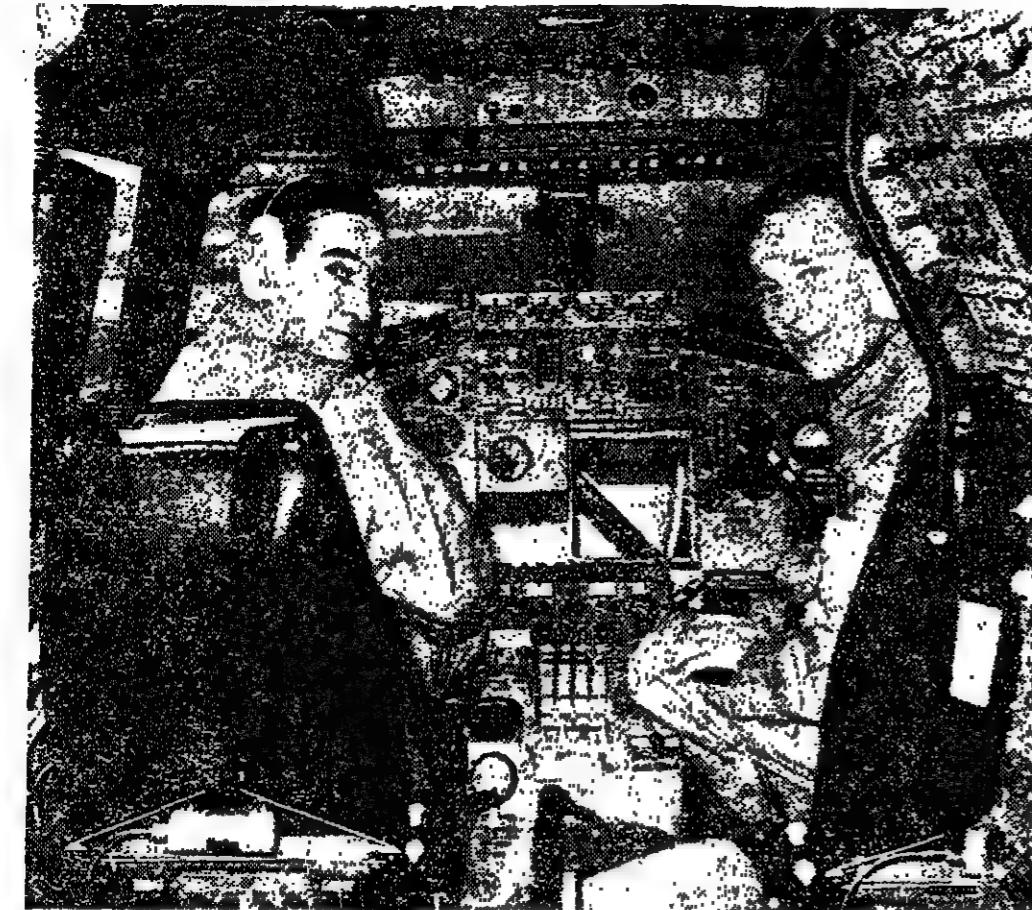
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Brian Trubshaw (left) Director of Flight Test for the BAC's Commercial Aircraft Division, and John Cochrane, his assistant director, seen at the controls of the Concorde.

BICC, pioneers since the first passenger flights, designed Concorde's airframe cable

Aircraft & Instrumentation Cables

Apart from the airframe wiring cable, which accounts for most of the cabling within an aircraft, BICC supplied a major proportion of the other cabling for the four prototypes and the subsequent sixteen production Concorde.

Technological Spin-Offs

An earlier development of KP210, the KP150 airframe cable with silver-plated copper conductors has been used in the MRCA, the Shorts SD 330, and the wide-bodied European Airbus A300B built by Airbus Industrie.

Unique Solutions to Unique Problems

Numerous standard types of cables available from BICC meet the needs of advanced engineering projects. However, for exceptional requirements of large commercial projects—such as those in the Anglo-French Concorde—BICC can produce suitable designs by the use of new materials, new techniques, or new cable constructions.

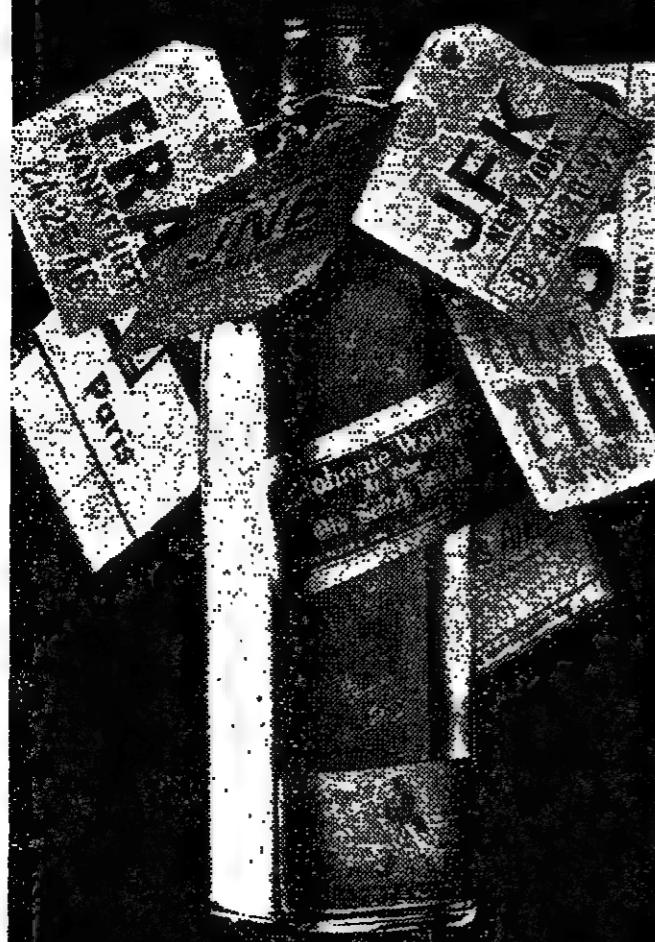


CONCORDE X

One of the most persistent criticisms of the Concorde project is that it has been a profligate waste of the country's resources, which some have claimed could have been spent in a more socially desirable way.

Costs in perspective

The square bottle that gets around



Johnnie Walker;
the world's No.1 Scotch whisky.
Born 1820 still going strong.

THE ARGUMENT over the ceramics, glass, fuel management, the theory of structures, and so on.

It is accepted that most of this R & D money will not now be recovered, although a course, there are no detailed

figures, taken from the Government's Monthly Digest of Statistics, might be helpful in putting Concorde spending in the right perspective.

First, the cost of the research and development programme since the project's inception in November, 1962, to the end of the R & D activities some time in 1977-78 when the static and fatigue-testing on the ground finally come to an end, is put at £1,096m, calculated at the exchange rates prevailing when the costs were incurred or estimated in the case of spending after the end of 1975. Of this sum, about £950m had been spent by the end of 1975, roughly £475m by each country. This was equal to about £36m a year, or so, spent by each country over the 13 years' life of the venture so far.

By comparison, over those same 13 years Britain alone had spent a total of over £15,000m. on beer, over £11,500m. on wines and spirits, and over £20,000m. on tobacco. It is probable that spending on alcohol and tobacco in France are not significantly different from these figures. While no one would dispute that many millions enjoy drinking, smoking, and even gambling, and that there are substantial industries based upon those items, the comparable spending of £36m. a year on Concorde R & D does not seem to be quite so disgracefully profligate after all, especially when it is also borne in mind that Concorde has created direct employment for approaching 25,000 people in this country and a similar number in France on the engine, airframe and systems involved, quite apart from the new technologies that have been spawned from it in

Between November, 1962, and the end of 1974, the total spending on Concorde R & D in actual costs at the prices and exchange rate prevailing when the costs were incurred, was £283m., of which the U.K.'s share was £186m. and the French share £97m. Between January 1, 1975, to the completion of the programme (probably around 1979, when fatigue testing ends having simulated nearly 90,000 flight hours), but measured in January, 1975, prices, and at an exchange rate of £1-Frs.10.25, the balance of the R & D outlays is set at £243m., of which the U.K.'s share is £112m. and the French share £131m.

Much of those sums in fact were spent through 1975, so that by the end of last year, total R & D outlays had reached about £960m., leaving about £148m. still to be spent. This money will be devoted to the post-Certification work on the aeroplane that has still to be done in both countries, the largest item being particularly the fatigue testing work that will run for some time to come, and some further work on engine noise reduction and any additional post-Certification flying that has to be done for special purposes.

Guaranteed

These figures do not take into account the production funding for the Concorde, which it is intended to be fully recoverable from the sales of the aircraft to the airlines. This money, which is expected to amount to at least £400m., or about £200m. for each country — representing approximately £25m. for each of the 16 aircraft involved excluding spares (or £30m. including spares) — is being provided to the manufacturers by the Government in the form of interest-bearing loans, or by loans from the manufacturers' bankers guaranteed by the Government.

Under the Concorde Aircraft Bill of November, 1972, up to a possible maximum of £350m. may be lent by the U.K. Government for Concorde production purposes. So far, by the end of 1975, it is understood that about £150m. has been spent on production in the U.K. and a similar sum in France, covering the six production aircraft already flying, and the work on the remaining ten, which are in an advanced stage of structural assembly.

In fact, production spending itself is probably now well over the half-way mark. Of the ten aircraft still being built, at least two are recognisable aeroplanes, and many of the others are rapidly taking shape, and many parts for the entire production batch authorised so far have been completed, with some sub-contractors now leaving the programme. As a result, the production momentum is slowing, and both Aérospatiale and British Aircraft Corporation are having to lay off labour across the spectrum of Concorde work, from design through to assembly line personnel. As a result, production spending seems likely to drop during 1976, and decline further in 1977, unless new orders emerge.

From all this, it can be seen that overall Concorde spending is now well past its peak, and is on the decline. Everything now depends upon how well the aeroplane performs in service, for it is this factor — in both economic and social acceptability terms — that will determine whether or not other air- lines will be encouraged to buy.

This gives rise to the question — just how well will the aeroplane do in service? So far, of varying from first-class to first-class plus 20 per cent. accord- ing to the route. The fares for both routes to be flown first, London-Bahrain and London to Rio de Janeiro, will bear first class plus 20 per cent rates, and onwards has to be based on

much conjecture — such as fuel proportions may not deter the passengers. Recent surveys conducted by Concorde's manufac- turers have suggested that varying key basic assumptions, such as those on annual utilisa- tion, amortisation, seating la- outs, fuel costs, fares and market penetration, the future whose fares are paid for by economics of any transport air- craft can be varied almost at will from substantial profit to substantial loss.

The BAC itself has said that, taking middle-of-the-road assumptions for 1977, Concorde will break-even at around 50 passengers per trip — or on a 50 per cent load factor on a 100-seat layout.

The BAC view is that the average load factor is more likely to be in the 80 per cent area — and it has based its proposition that, estimate on a ten-years' break-even point.

But even fares levels of such hours a year utilisation rate, a 3,000 executive clientele, which is w

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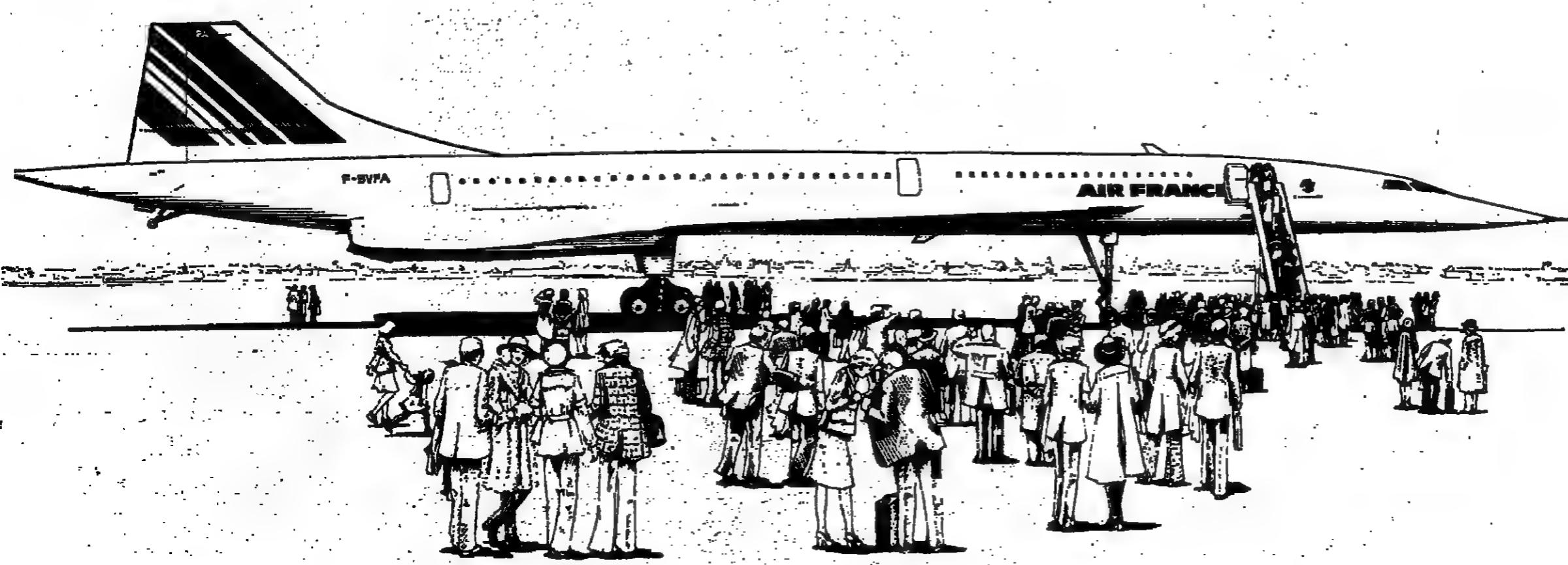
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Companies involved

Marconi-Elliott Avionic Systems, Rochester	Automatic flight
Marshall of Cambridge	Teeling & elect
Midcast Numerical Control Group, Glen Parva	Teeling and othe
Minnesota Mining & Manufacturing, London	Adhesive film, punched cards
Moores (Wallisdown), Bournemouth	Tooling and ma
Morfax, Mitcham	Flying control machin
Normalair Garrett, Yeovil	Air valves and
Northbridge Engineering, Leicesters	Leicester
Ottershaw Engineering, Weybridge	Machining
Planer Products, Sunbury	Ground equipme
Plessey Group	Fuel system pur
Rank Xerox, Uxbridge	data acquisit
Raychem, Swindon	Titanium tubes
RFD-GQ, Godalming	Escape equipme
Rosemount Engineering, Bognor	Ground equipme
Sandvik U.K., Halesowen	Tooling and othe
Sculpture Machining, Bedford	Tooling and othe
S.E. Laboratories (Eng.), Feltham	Elect. instrumen
Servicron Dynamics, Cheltenham	Ground equipment
Shell Mex & BP	Aviation produc
Sintrom Electronics, Reading	Ground equipmen
Smith Clayton Forge, Lincoln	Forgings
Smiths Industries	Instruments and
Superfexit	Conduits
Syston Donner, Leamington Spa	Fire-detection eq
C. F. Taylor (Metal Workers), Wokingham	Tooling & electri

Day 1 of Mach 2.

January 21, 1976. Concorde makes history's 1st commercial supersonic flight.



Concorde
AIR FRANCE

A new world of flying.

CONCORDE XIII

Several companies involved in the Concorde project have carried out basic research and development which have made them pre-eminent in their fields. In particular are the makers of the fuel management system and the Automatic Flight Control System—the most sophisticated ever in their field.

Advanced technology

LONG the many individual aer and sub-contractor, and the technological achievements that complex fuel management systems have helped to make Concorde seem, in which a large number of revolutionary aeroplane, it of companies have been involved. There are several that are involved, including Shell and BP, themselves have involved substantial background research.

The AFCS makes Concorde safe and stable, while flying at the speed of a rifle bullet, and yet brings it into an automatic landing safely and gently. All modern airliners need some form of automatic flight control system, providing both an automatic augmentation of the aircraft's natural stability while in flight, and the ability to fly "hands off" the controls, free.

Two of these which are worth detailed examination are the Automatic Flight Control System (AFCS), the most advanced of any airliner in the world, developed by Marconi-Elliott Avionics Systems in the U.K., prime contractor, with EMA of France acting as part-

communication with the ground trailing edge of the delta wing, aiding automatic landing itself, and overall flight management, giving pitch and roll control. The AFCS also involves other sub-systems, some of which are fundamental to flight by all big modern airliners, and it is thus take-off until after landing, as an automatic throttle to control the speed throughout the whole flight; electric trim to keep the aircraft properly trimmed at all times; a warning and landing display that indicates to the pilot when an automatic landing can be undertaken; and safety flight control.

The autostabilisation system, other aircraft, with 32 "modes" is used from the moment the engines are started until they themselves can select—including those for take-off and safety flight control, giving automatic protection against reaching a dangerous attitude in flight—for example, this can overcome the effects of any mechanical jamming of the controls, a degree of protection possessed by no other airliner.

Standards

As a result of all the work done by Marconi-Elliott and SFENA on the AFCS design standards used for Concorde have become the accepted standard for the latest subsonic jets, including TriStar, DC-10 and the Boeing 747. Although these aircraft entered service before Concorde, the major decisions were made for Concorde before those aircraft were projected. As a result, the high standards set in Europe have inspired considerable confidence throughout the world in the ability of the companies concerned to provide AFCS, and Marconi-Elliott has made several breakthroughs in exporting the system. Examples include the purchase by Boeing of an advanced auto-throttle system for the later 747 Jumbo Jets—an order strongly influenced by Marconi-Elliott's involvement with Concorde. Boeing has also bought the AFCS from Marconi-Elliott for the YC-14, its contender in the current U.S. Air Force competition for a replacement for the Hercules transport aircraft, while Panavia has chosen Marconi-Elliott to supply the AFCS for the Multi-Role

Combat Aircraft (MRCA). For transferred aft. Another important aspect of this fuel pumping system, which is unique to Concorde, is to ensure that no excessive loads are applied in any part of the structure throughout the various phases of the flight as the fuel is progressively used up. Plessey

has also given rise during the Concorde development programme to a detailed programme of research by the major fuel companies, Shell and BP. Shell Research, in conjunction with the Concorde manufacturers and the Department of Industry, developed a rig at the Shell Thornton Research Centre, reproducing as closely as possible the Concorde's fuel system conditions. As a result high quality fuels and lubricants are now available world-wide that are suitable for Concorde.

The BAC itself, at its Filton factory, built a complete replica of the complex Concorde fuel management system, which has been used to test and prove the detailed functioning of the transfer techniques that are employed in the aircraft. The fact that the Concorde has already been flying without mis-

hap for nearly seven years, with over 5m. miles to its credit world-wide, indicates how stored, but passed out through the engines. The kind of work that the fuel has to do in this context can be gauged from the fact that, while the temperature at subsonic speeds, fuel is also 60,000 feet is around minus 60 degrees Centigrade, the temperature of the Concorde's external structure as a result of kinetic heating can rise to as much as plus 150 degrees Centigrade at the tip of the nose, and French taxpayers who have applied in any part of the structure throughout the various points over the skin.

The use of fuel in this way has also given rise during the Concorde development programme to a detailed programme of research by the major fuel companies, Shell and BP. Shell Research, in conjunction with the Concorde manufacturers and the Department of Industry, developed a rig at the Shell Thornton Research Centre, reproducing as closely as possible the Concorde's fuel system conditions.

Because of the large volume of fuel carried in the Concorde it offers the ideal medium for cooling and absorbing the surplus heat that the rest of the aircraft cannot absorb because there is no other cooling system available. The use of alternative methods, such as refrigeration, are ruled out because of the added weight, cost and complexity they would involve. The method of cooling employed is to pass the fuel during the passage from the tanks to the engines through a series of "heat exchangers." In this way, the surplus heat absorbed by the fuel tanks to the rear trim tank during accelerating through the transonic speed to supersonic cruising speed. At the end of the flight, fuel is pumped forward from the rear trim tank into the main and front trim tanks. When retrimming the aircraft for landing after prolonged flight at supersonic speeds, fuel is also 60,000 feet is around minus 60

M.D.



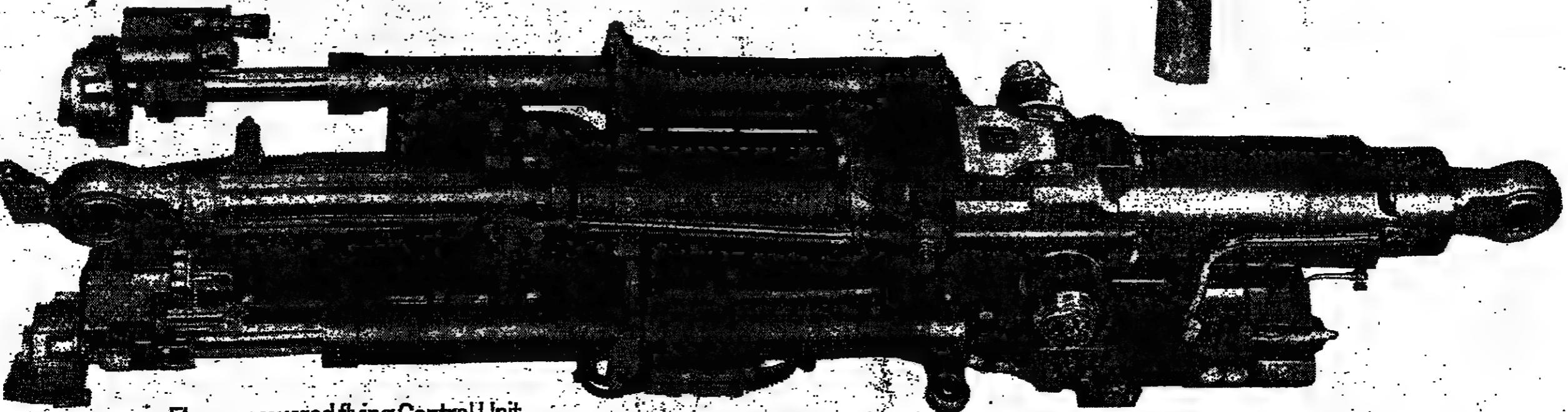
Part of the Concorde's extensive flight test programme included cold-weather trials in Alaska. The aircraft involved is the pre-production Concorde 02, which underwent a complete range of ground and flight trials in the worst possible weather conditions.



What the pilot sees. Although Concorde is the most complex civil airliner now flying, efforts have been made to keep the flight deck as simple and comfortable as possible for the crew, but to the layman it is still a bewildering array of instruments.

Concorde and DOWTY

Powered flying controls, ram air turbine, precision seals, electrical and hydraulic equipment. Concorde—one of over 200 aircraft types depending on Dowty.



Elevon powered flying Control Unit



DOWTY GROUP · CHERTSEY · ENGLAND

CONCORDE XV

Four men, each a leading personality in world aviation, have come to be regarded as the symbols of the immense human effort which has gone into the making of Concorde. Their lives and achievements are discussed here.

OF ALL the 75,000 men and major women on both sides of the reorganisation of the aerospace industry in 1950. In that post at BAC, he initiated the short-haul development of the Concorde, eleven jet airliner, and played a prominent part in the negotiations which led to the signature in the public mind as those who have borne the most heavy burdens and responsibilities for the Concorde agreement in November 1962.

From then on, Sir George Edwards became increasingly closely involved with Concorde, especially when he was appointed chairman and managing director of the British Aircraft Corporation (Operating) in 1963 (that company later changing its name to "Mr. Concorde" in this country; his counterpart in France, M. Henri Ziegler, for many years the president of Aérospatiale before his retirement in early last year; Mr. Brian Trubshaw, the Director of Flight Test for the Commercial Aircraft Division of the British Aircraft Corporation, who has been in command of the U.K. side of the Concorde flight trials; and his counterpart in France, M. André Turcat.

All four would dispute any suggestion that it is they who have built and brought Concorde safely through its 13 years of passenger services, and they would argue that had they not been there, others would have done the job just as well. Nonetheless, the fact remains that it is to these four men that much of the credit and honour for the success of the programme must go.

Experience

In the U.K., Sir George Edwards has been associated with the aerospace industry for the whole of his working life. He joined Vickers-Armstrong at Weybridge at the age of 27 in 1935, having previously acquired general engineering experience after gaining his engineering degree at the South West Essex Technical College and the University of London. He worked in the experimental design and drawing offices until the outbreak of war in 1939, when he was appointed experimental works manager. He remained there throughout the war until September 1945, when he was appointed chief designer of Vickers-Armstrongs (Aircraft), becoming head of the design team that was to produce some of the most famous of all British aircraft, including the Viking, Valetta, Varsity and Viscount transports—the last named the world's first turbo-prop airliner and one of this country's most successful civil aircraft ever—and the Valiant V-bomber. On being appointed managing director of Vickers-Armstrongs (Aircraft) in 1953, he continued to be responsible for the overall technical direction of the company, and for the Vanguard turbo-prop airliner, the VC-10 four-engined jetliner, and the TSR-2 tactical-strike/reconnaissance aircraft.

Knighted in 1957, Sir George became the Executive Director (Aircraft) of the British Aircraft Corporation when that organisation was formed in the

Cradle

Mr. Brian Trubshaw came into the test pilot's business from the RAF, where he flew bombers on raids over the Ruhr. In 1948, he attended what has been called "the cradle of British test pilots"—the famous Empire Test Pilots' Training School at Farnborough—and he subsequently joined the Vickers-Armstrongs (Aircraft) team at Weybridge, where he test-flew the Valiant V-bomber, and played a significant role in helping the development flying of the famous Vickers stable of stirrers—the turbo-prop Viscount and Vanguard, and the turbo-jet VC-10. Before being assigned to the Concorde programme, he improved his flying skills by piloting American supersonic B-58 bombers.

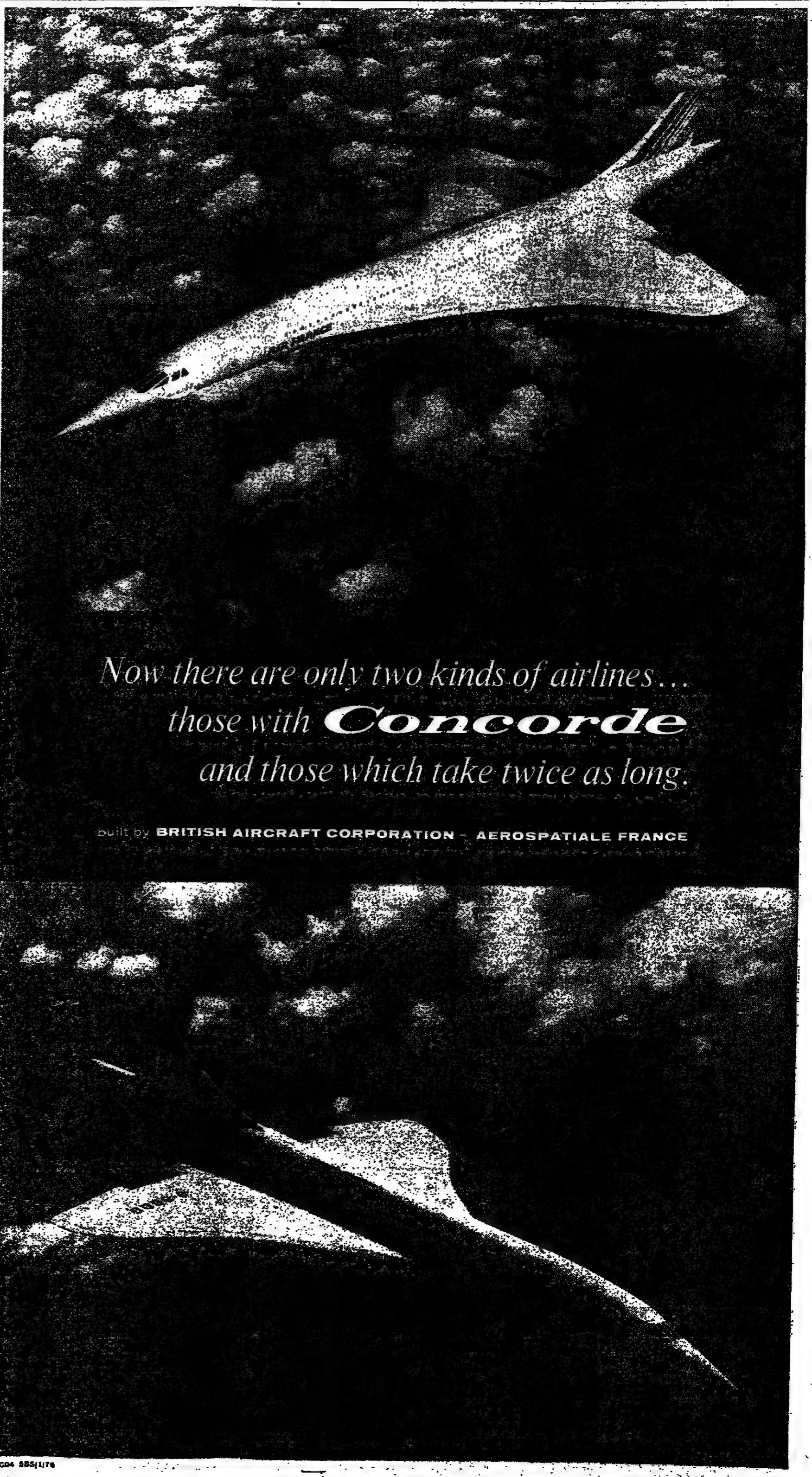
He is the first to stress that he is part of a team—"I'm just a businessman these days. I sit at a desk, plan ahead, look after the team." He is also a modest, quietly-spoken man, who tends to play down the fame accumulated throughout the world during the Concorde flight test programme—where at various airports his name became pronounced as "Klophaw" or "Tupaha." Now into his early 50s, Brian Trubshaw, his stocky figure sometimes encased in the test pilot's garb of orange day-glo-overalls, and sometimes in a somewhat crumpled suit, has found himself being more than test pilot or a businessman—he has had to be a roving ambassador for the Concorde, frequently called on to answer ad hoc questions from the Press and TV reporters on the aircraft's steps. He has remained imperturbable throughout, his voice calm, the manner modest, but the brain razor sharp to pick up and lob back to the questioner anything that he has felt derogatory to the project to which he has devoted so much care and attention over the past 13 years.

With the flight development programme now completed, there is still Concorde work to be done. The remaining ten production aircraft which have still to fly will have to be nursed into the air and through their own individual flight test programmes, and there are the

Four big names

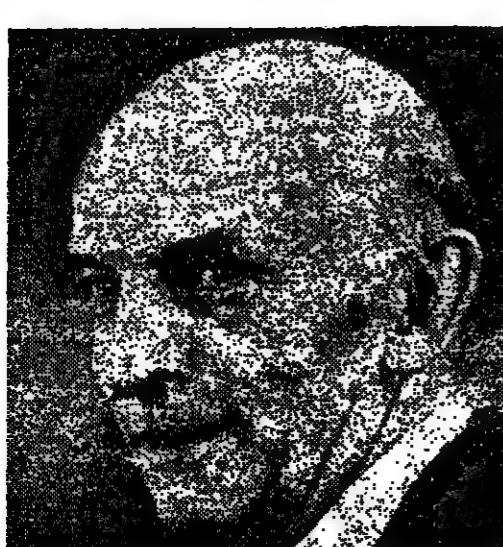
flight. In February, 1957, he where he first became responsible for the development of the Caravelle automatic landing system. He remained with Sud-Aviation (later to become known as Aérospatiale), and was appointed in the early 1960s to the flight development programme of Concorde. He had record of 1,180 km. per hour. In recognition of his contributions to the technical progress of aviation, he received in 1959 the Harmon Award, one of which he made his famous world's highest aeronautical phrase: "And so the Big Bird flies, and as you can see, it flies very well." Thereafter, André Turcat has flown his Big Bird many times, and has shared with Brian Trubshaw the responsibility of supervising the complex flight test programme that has brought the Concorde to the point of entry into service with no mishap in over 5,500 hours of flying—a record unparalleled in the history of civil aviation.

M.D.

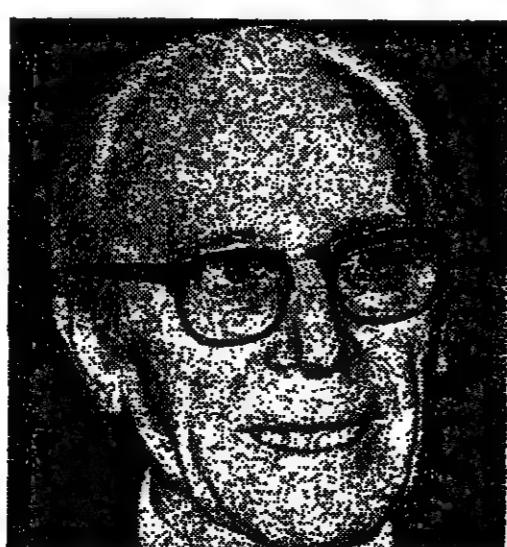


Now there are only two kinds of airlines.
those with **Concorde**
and those which take twice as long.

built by BRITISH AIRCRAFT CORPORATION - AEROSPATIALE FRANCE



The manufacturers: Sir George Edwards, former chairman of British Aircraft Corporation (left), and M. Henri Ziegler, former president of Aérospatiale.



The pilots: Mr. Brian Trubshaw, director of flight test for BAC's Commercial Aircraft Division (left) and M. André Turcat, director of flight test for Aérospatiale.

The Financial Times Wednesday January 21 1976

A private Bill about to have its second reading in Parliament seeks to allow a big expansion of the building and construction activities of the Greater London Council and the London boroughs. Michael Cassell examines the controversy over local authorities' direct labour operations

Fair foundations for building council competition

A PRIVATE BILL sponsored by the Greater London Council and due soon for its second reading has become the centre of a rumbling controversy which now threatens to break out and embrace most of the construction industry and both major political parties.

The GLC (General Powers) Bill 1975-76 aims to extend the scope of local authority building and maintenance operations into areas previously the preserve of private contractors. By its opponents, the scheme is seen as another attempt to undermine private enterprise and bring closer the full-scale nationalisation of the construction industry.

Boroughs

The Bill sponsored by the GLC — whose own direct works department is undertaking £5m. of business this year — is on behalf of the 33 London boroughs and the City of London. A successful passage for the Bill, which is being watched closely by local authorities in any parts of the country, could enable London councils not only to tender against each other for local authority building, repair and maintenance work but would permit them to move into the private sector in

search of contracts for construction work in areas like factory and office development and even motorway construction. Councils would also be able to offer their professional and technical services to private clients.

The reaction of private builders has been predictable. Their basic opposition is founded on the belief that local authority building departments are bad news for the customers and for the ratepayers.

Opinion among the contractors is broadly in line with Conservative Party thinking on the subject. What is of real concern to both is that the move by the GLC, in many ways, reflects current thinking within the Department of the Environment and, more specifically, in the mind of Mr. Reg Freeson, Minister for Housing and Construction. The Minister, who has set up a working party to examine direct labour departments and to provide a basis for their future development, believes that the role of these operations in building can and should be expanded.

Latest estimates suggest that public authority building departments account for around 14 per cent of all public works construction, or 7 to 8 per cent of all building output in the U.K. They are thought to employ some 165,000 operatives and Mr. Freeson sees their continued

Losses

He claims that Coventry contractors have calculated that improvement work now being carried out by the city's building department at a cost of £7,000 a house could be done by them for £4,000; Norwich council has had to report losses in excess of £200,000 on four of its own housing schemes and Southwark council in London is holding an inquiry into the overspending of about £1m. on two direct-labour housing estates.

Direct labour methods, argue its opponents, are superficially attractive to local authorities because they are "non-profit making," but they claim that the absence of the need to earn a profit or record a return on turnover or assets employed removes tender competitiveness against

contractors and that competition was the only real means by which an authority could ensure genuine value for money. The report also called for tighter financial disciplines, including the publication of extra costs having to be borne by the council. There can be no contract to limit the council's liability, as there is with a separate trading service of local authorities.

Private builders say that work on the basis of an under-priced estimate, with all the extra costs having to be borne by the council. There can be no contract to limit the council's liability, as there is with a separate trading service of

builder, since a council cannot enter into a contract with itself. In addition, the true final cost of a project will not be shown because many costs will be lost in other local authority accounts.

Above all, the private contractors claim that if the Government wants to expand direct

work operations some attempt to be made. The many different forms of accounting employed in local authorities would have to be standardised before this could be done, but the contractors say that the amount of public money involved makes such a move essential.

Contractors' efforts to establish "fair and real competition" in the contracting field are recently given a big boost by a report from the Chartered Institute of Public Finance and Accountancy, which emphasised that direct labour departments should be regarded as a sphere of activity as an area for major expansion and we must have proper safeguards to ensure that if these departments are to continue they become subject to the same rules of accountability which apply to their competitors."

In the opinion of Mr. Richard

Letters to the Editor

Civil Service earnings

Mr. Vice-President
General and Employment
Relations Institute of
Personnel Management

The current row over service pay prompts me to test that there are two factors requiring investigation. The first concerns the Civil Service Pay Research Unit's task in listing the facts about comparative levels of pay in the civil service, particularly in nationalised industries in private industry. It is difficult to ensure that comparisons are fair but my hunch is that the leads me to feel confident they have been able to establish which grade of staff in private industry is doing work comparable to that expected of these particular levels in the civil service.

As disparity in pay, which usually exists, arises. I see, from differences in the public private sectors. To take one example, almost all the graduates in the scientific civil service reach the principal grade, what is more, get to the top of the P.S.O. scale (£2,205 per annum) before retirement. In private industry, advance to a separable grade (where the rent salary ceiling in large firms seems to be near to figure quoted above) depends on individual development opportunities and no guarantees can be, or are, given. A significant proportion of those who could have qualified for entry to the civil service, therefore, do not reach the equivalent P.S.O. grade.

Further, salary advance within a grade in private industry depends upon performance. Incremental increments are rare, as in trying to establish "fair comparisons." The disparity is very apparent when salary/career lines for qualified staff are compared but of course comparison does not provide basis for determining the appropriate levels of pay for a particular grade. A survey carried out in March 1975 covering levels and engineering graduates in 30 large and medium sized firms showed that at age 50, which age almost all P.S.O.s have reached the ceiling of their salaries, 60 per cent of the graduates in research laboratories were £7,000 per annum.

My second point is to suggest that the respective merits of these two methods of rewarding staff should be examined. Finally, as are applied in the civil service, the salary/career line is a long one. However I am sure that arguments are often advanced in favour of the civil service method.

J. Morris
Central House,
100 Woburn Place, W.C.1.

ordinary people for a long, long time.

Mr. Rogaly ended with a call for "decisive Government action." May I suggest what that should be?

Obviously Mr. Mulley should get rid of the whole H.M. Inspectorate of Schools, whose only raison d'être was to prevent the present state of affairs from arising.

If he would then, (a) replace the present inspectors with experienced teachers not under the age of 45, and charge them to insist on the successful teaching of basic skills,

(b) insist that every would-be teacher spends a year in a school as a teacher's assistant before going to college,

(c) insist on five years' teaching experience for all teacher-training lecturers,

(d) further insist that they return to the classroom for at least a year after every five years as a lecturer,

the he would go down in history as the Minister who did most to get value for our truly enormous expenditure on education.

Douglas Dale
Birch Crest, Hildersome Road,
Matlock, Derbyshire.

Minimum price for oil

From the Chairman,
W. H. Jones and Co.

Sir — From your columns (January 17) it appears that the British Government, together with other Governments in the EEC, are entering into an agreement to establish a minimum price for imports of oil.

I challenge any of your readers to justify such an act. Under what circumstances can it possibly be right to prevent oil entering this country at prices below £1 per barrel if it is available?

Newton Jones
Whitstone, N.W.20.

Plugging the cavities

From the Secretary,
Agreement Board.

Sir — Last October the Government issued a "Type Relaxation" (Direction No. 1) enabling many householders to have their wall cavities filled without the necessity of obtaining from the Building Regulations.

An essential requirement of this procedure is that the installation must be carried out under cover of a certificate issued by this Board.

On January 12 you reported that the National Cavity Insulation Association was seriously concerned by problems caused to householders in coastal areas through "misinterpretation of the wording of the Agreement certificates concerned."

I am writing to inform you that this Board is aware of difficulties that can arise, in some cases, in the interpretation of the criteria in the present certificates of cavity fill. At the time these were set down, they were based on the latest technical data available, and were drawn up with a view to protecting householders from filling their wall cavities where conditions were not suitable.

More accurate information concerning the effect of local climatic conditions in relation to the filling of wall cavities is now available and this Board is at present redrafting the certificates in the light of this new data.

The Board is confident that these revised certificates will be easier to interpret and will undoubtedly have the effect of

enabling a far larger number of three years — a period in which they have, by no means, matched

what we did have to cope with ever-increasing inflation (14 per cent, for example, in 1973), a fact which most people seem to have two years after retirement. Not forgotten. In fact the rise is only one people who have made

practically identical to the increase in operational costs in

industry receiving a raw deal

from the tax on invested savings, but they are also restricted in the amount they can earn in re

irement by other unfair restrictions by the Department of Health and Social Security. These are the penalties the prudent

man has to pay when he endeavours to safeguard his family's future.

J. L. Harrison
High Meadow, 35, Moor Lane,
Addingham, Ilkley.

I maintain that 81 per cent, in three years is a lot better than Labour's 114 per cent. in 18 months — 14 per cent. I would add, despite the £170m. odd of rate-and-taxpayers' money poured in, in a vain attempt to keep fares down — and this reflects both the will (or lack of will) and the ability (or lack of ability) of the respective parties to control London Transport's finances.

Horace Cutler
Greater London Council,
The County Hall, S.E.1.

A presumption of innocence

From Mr. R. Morsley Smith

Sir — The recent statement of intent by the Leader of the Greater London Council and the decision last week of its Policy and Resources Committee to modify the title and terms of reference of the Strategic Policy Board are a welcome sign that local government in London has accepted some responsibility for reducing the outward movement of people and jobs from London.

For some seven years the London Chamber of Commerce and Industry has been pointing out that over-ridingly administrative controls on employment — in the form of Office Development Permits and Industrial Development Certificates — coupled with extended planning procedures threaten the long-term viability of London as a commercial and industrial centre. In addition, the private rented sector of the housing market has been forced to contract for reasons which seem to owe more to a blind devotion to narrow dogma than to a rational assessment of what accommodation might most efficiently be made available to those who either do not need or cannot afford to buy.

The London Chamber has been an untiring advocate of a positive policy of reversing the trend of declining employment in London which has resulted in a narrowing of London's industrial base and a distortion of the employment opportunities available to Londoners. Providing housing and employment in the expanding towns not only contributes nothing to solving the housing problem in London, but by creaming-off expanding employment and skilled labour, leaves reduced opportunities for those who stay behind.

This is not to dispute the wisdom of the initial concept not only of the expanding, but also of the new towns, but the time has now come to take stock of the results and to introduce corrective measures where they are obviously necessary. These measures must now include a policy of encouraging those sectors of industry and commerce nothing to do with defence which wish to remain or set up in London to do so, and the GLC's measures are a welcome step along this road.

A. G. C. Trollope
69, Cannon Street, E.C.4.

R. Morsley Smith
37, Lombard Square, N.I.

C. P. Snow writes: I shouldn't have written this positively, of course unless I was sure of my ground. A number of years ago three colleagues and I were asked for a TV programme to examine the evidence and present arguments for Wallace's innocence and equally for his guilt. We spent much time in Liverpool, talked to many people connected with the case (a lot of them were then still alive), and had to drop the project without taking or abandoning our intellectual honesty. We couldn't construct even a feeble argument for innocence. This has been the same experience for those others who have made similar investigations. — compare D. G. Waddams.

"Longfield"
South Brent, South Devon.

Longfield

Approximation to reality

From Mr. E. Clayton.

Sir — There is a possibility of error in the reasoning used by Professor D. Myddleton (January 13) to reach the conclusion that Sandlands is "utter nonsense."

Using the example and assumptions chosen by Professor Myddleton, it is clear that the investor, by reinvesting £750 of the proceeds of the sale of his capital, is left with exactly the same £750, provided he does so before but with an additional £100 in cash to reinvest or to spend at will. This £100 would therefore seem to be some form of profit which has arisen from the business of investment.

A very different situation arises if it is assumed that an investor is investing his business as an investor and is converting his equities that is to say, his operating plant and equipment into cash. It would be irrational to use a measure of replacement cost to assess this investor's financial position because no replacement of the equities is envisaged and, in these circumstances it seems more reasonable to apply some form of current purchasing power accounting to compare the original investment with the final realisation.

Sandlands is surely intended to provide an approximation to reality in a continuing business situation. It seems illogical to use its replacement cost approach to assess a closure situation.

E. J. F. Clayton
42, Winterbourne Road,
Sollom, West Midlands.

J. L. Harrison
Fares in London

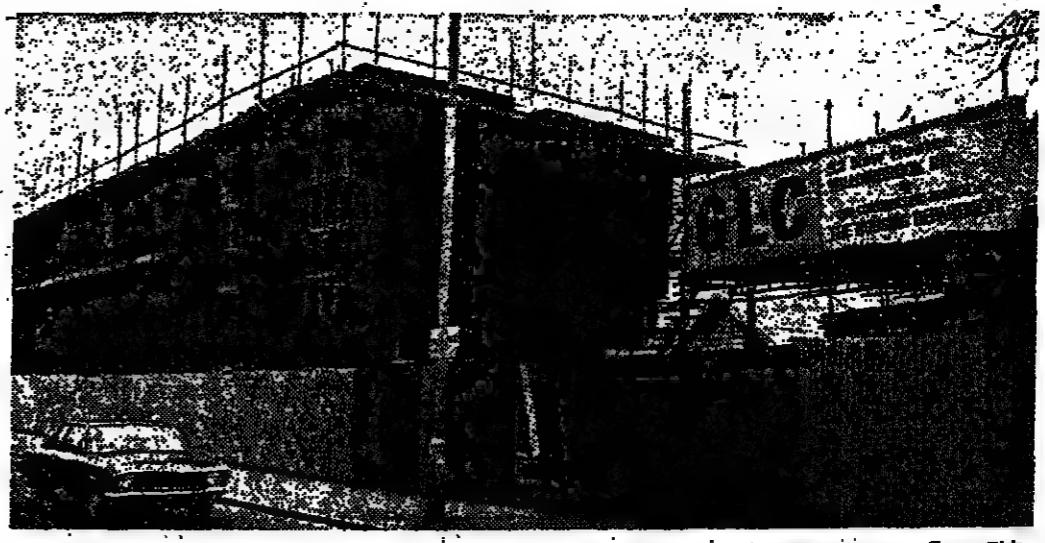
From the Leader of the Opposition, GLC

Sir — I take great exception to Mr. T. E. Alexander's attempt (January 18) to tar my party with the same brush as the Labour party by equating London Transport fares increases under the Conservative GLC in 1970-73 with those in the last two years. The GLC assumed responsibility for LT on January 1, 1970, and the rises which took effect under my party were:

August 1970 15.0%
January 1972 10.0%
September 1972 3.5%

The last of these was imposed to balance LT's books up to the end of 1973. This is a cumulative rise of 31 per cent. over

which has been good. While these have been



Terry Kirk
A GLC housing development at Peckham, South London, now the Council is seeking powers for itself and the London boroughs to step into the private sector in search of building contracts.

Balfe, the young and politically astute chairman of the GLC, the lack of financial accountancy development committee, ability and normal business disciplines shown by direct labour operations and that they have for the Council's private Bill, Mr. Balfe emphasises that his plans for London should raise no objections to those grounds.

"The Bill states that the building department must earn enough to defray expenditure and separate audited accounts for the operations will also be better thought out and defined than in the past.

The Minister believes that competition under fair and reasonable rules has an important part to play in stimulating efficiency and that a vigorous public sector could help provide the competition.

Mr. Freeson recognises that the costing and accounting practices adopted by direct labour departments should enable the efficiency of these operations to be properly judged and compared and his working party is now looking into these procedures.

"As a man who feels that direct labour departments have a growing part to play in the make-up of the U.K. contracting industry, he is certainly being left in no doubt as to the operational changes in operational procedures which the remainder of the construction sector thinks must first take place. Then the industry emphasises, it well-known love of competition can be fairly put to the test.

More work

"I am not pushing this through just to give the department more work and deny to the private contractor. It only handles about 20 per cent. of all GLC building work in any case and we could easily boost this figure without resorting to Parliamentary measures.

"We merely wish to be able to tackle any area of construction which we believe we can do to the benefit of the authority and the ratepayer and there is certainly not going to be any headlong rush into office building and motorway construction."

To the inevitable response that it is they who are at a

disadvantage because of the whispers about "backdoor nationalisation" but nevertheless is apparently anxious to ensure that, if the role of the direct labour unit is to spread, then the ground rules which guide its conduct must be better thought out and defined than in the past.

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To-day's Events

GENERAL
British Airways Concorde takes off from Heathrow at 11.30 a.m. on its first commercial flight to Bahrain. Air France Concorde leaves Paris simultaneously for Rio de Janeiro.

COMPANY RESULTS
Centre Hotel (Cransfont) (half-year).
Ranier Motor Group (full year).
Thorn Electrical Industries (half-year).
Union Discount Co. of London (full year).
COMPANY MEETINGS
Debenham (J. A.), Weymouth, 12.30.
Wolverhampton and Dudley Breweries, Dudley, 12.30.

PARLIAMENTARY BUSINESS
House of Commons: Motion on suggested amendments to Trade Union and Labour Relations (Amendment) Bill.

House of Lords: Debates on continuing growth of juvenile crime and on increased fees for overseas students.

OFFICIAL STATISTICS
Rugby Union: Gwent v. Australia. Hants. Pontypool.

Soccer: League Cup semi-finals (2nd leg): Manchester City v. Middlesbrough; Newcastle v. Tottenham.

</div

COMPANY NEWS + COMMENT

Courts (Furnishers) profit expansion

TOURNOVER for the half year to September 30, 1975, of Courts (Furnishers) expanded from £12.58m. to £16.92, excluding VAT, and pre-tax profit advanced from £1.11m. to £1.30m.

Trading in both the U.K. and overseas has been good so far in the second, traditionally more profitable, half year with the result that profits for the whole year are expected to show a "satisfactory increase" over last year's £3.8m. the directors state.

Three new branches have been added in the U.K. in the current financial year and three more are scheduled to open in the next few months. With over 100 stores trading in six countries, the group is "soundly based" for continuing further progress, the directors add.

The interim dividend is stepped up from 1.17 to 1.28p net per 25p share. Last year's total was 2.35314p.

Turnover 1975 1974-75
£m. £m.
Operative profit 16.922 12.581
Pre-tax profit 1.301 1.111
Profit before tax 1.301 1.111
Taxation 1.292 1.091
£.1. profit 1.301 1.111
Interim dividend 1.281 1.111

Profit per share 1.301 1.111
Dividend per share 1.281 1.111

Profit per share 1.301 1.111

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sales and overall volume has been strong, with special hopes now pinned on the group's new air-freight system for shipping planes in hangs instead of with the old mobile units. Both Heathrow and Brussels have now bought this system. Under Treasury rules, the group has scope for increasing its dividend—particularly as the cover (using last year's net payout) on latest 12 months' profits is now up to 3.6 times. Debt has been eliminated from the balance sheet, and the shares at 60p offer an historic yield of just over 5 per cent.

The capital expenditure programme, which has involved over £57,770, compared with £37,770, in the last two years, has continued. A substantial part of the new plant is still not fully operational and will not contribute to profits until later in the current year, the directors state.

Basic earnings per 25p share for the year 1974-75 are stated to be down from 11.4p to 4.2p and fully diluted from 8.8p to 3.7p.

As forecast and with Treasury consent the dividend is raised from 2.075p to a record £922,000 in the year to September 30, 1975. At the interim stage, when profit was up from £263,000 to £410,000, the chairman, Mr. E. C. Marsland, said he confidently expected further progress in the second half.

Shareholdings per 3p share for the year are up from 3.18p to 3.8p basic and from 2.68p to 3.30p fully diluted. A final dividend of 0.984p lifts the net total from 0.725p to a maximum permitted 0.804p net. A total of 0.8125p had been intended.

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Marine Midland fourth quarter loss

BY GUY DE JONQUERES

MARINE MIDLAND Banks, the twelfth largest bank holding company in the U.S. with assets of more than \$11bn, disclosed today that it made a net loss of \$124m. during the fourth quarter of last year.

The loss, which compares with a net profit of \$85m. or 71 cents per share in the same quarter of 1974, had been forecast by the management last November when it cut the quarterly dividend to 20 cents from 45 cents per share. Its size is broadly in line with expectations on Wall Street.

Marine Midland's results for the year were also sharply depressed. Net profit from securities transactions fell to \$16.4m. or \$1.30 per share from \$37.6m. or \$3.15 per share in 1974.

Marine Midland's quarterly loss—the first to be reported by a bank of comparable size for several years—was due principally to large loan losses

incurred by its London merchant banking subsidiary, Intermarine between 1971 and 1974.

In addition, the company said that a "major portion" of its loans to Real Estate Investment Trusts, which total \$203m., had improved during 1975 and that operating expenditures were restrained.

Marine Midland's results for the fourth quarter and the whole of last year compare unfavourably with those so far reported by other banking concerns.

According to a table compiled by Salomon Brothers, 21 of the 32 companies which had reported by the end of last week showed increased fourth quarter earnings, ten recorded falls and one was unchanged.

For the year as a whole, the loan loss provision was raised to \$64m. from \$31.2m. This exceeded by \$9.7m. the actual amount of loan losses charged against the provision. \$54.3m. net loan losses were charged off last year, up from \$25m. in 1974.

Mr. Edward Duffy, Marine Midland's chairman, said that during the final quarter of last

NEW YORK, Jan. 20.

Bradken and Tubemakers bid moves

By James North SYDNEY, Jan. 20.

BRADKEN Consolidated, Australia's largest steel founder, and Tubemakers of Australia, the biggest steel pipe manufacturer, today announced major takeover moves in iron founding.

Bradken paid \$A5.245m. in cash and shares for McKelvey's, one of the largest iron founders in Australia. It is a big supplier of pressure mains to New South Wales water supply authorities.

Tubemakers is negotiating to acquire Ameast Engineering Company, a supplier of pressure mains to Victorian water supply authorities.

The consideration for the McKelvey deal was \$A3.85m. in cash and 450,000 Bradken shares, currently priced at \$A3.10.

The takeover is interesting because it means that Bradken has now issued all but 8,561 shares of its authorized capital. As elsewhere, Australian company law provides that a company's paid capital cannot exceed its authorized capital.

Bradken directors sought permission at the annual meeting last November to increase the authorized capital to leave room for further issues of shares but was blocked by its major shareholder, Australian National Industries (ANI).

ANI was involved in a bitter takeover duel with Comeng Holdings in 1974 for Bradken but neither company won. Both ended up with large holdings and ANI has been picking up more Bradken shares on and off the market in recent months, causing the Bradken Board some disquiet.

ANI now holds 36 per cent of Bradken's capital. Bradken directors are concerned that ANI is involved in a creeping takeover of their company.

Bradken's articles specify that capital increases require a special resolution needing a 75 per cent majority. This cannot be achieved without ANI's consent. Bradken sought to increase its authorized capital with an ordinary resolution requiring only a simple majority of votes, but ANI vetoed it. It apparently feared that Bradken might issue shares to other parties and water down its equity position.

The issue of 450,000 shares as part of the McKelvey's consideration will reduce ANI's equity stake from 36 per cent to 32.7 per cent, and the holding of Comeng from 27.4 per cent to 26.5 per cent.

Buoyant showing by Davies

By Richard Roche

JOHANNESBURG, Jan. 20. PRELIMINARY results from Hubert Davies for its full year to November 30 testify to the buoyancy of the engineering sector over 1975 flowing from the company's interests in engineering products, capital goods and contracting.

Turnover rose sharply from R76m. to R97m. and trading surplus from R4.1m. to R6.9m., showing margins slightly firmer at 6.1 per cent, up 0.8 per cent. Earnings per share rose from 28.8c to 35.4c and the final dividend from 5.5c to 7c making 12c for the year against 10c previously.

The shares picked up to 178c yesterday ahead of the figure, but the announcement found them 8c lower, more in response to market weakness than to the good profits. Hubert Davies is likely to score a further advance in the current year.

South Africa to raise \$25m.

LATEST Eurobond announcement is \$25m. for South Africa. Indicated coupon is 9 per cent, maturity five years and lead manager Banque de Paris et des Pays-Bas.

Priced at par yesterday were two D100m. issues. One, for Norpape, offered an 8 per cent coupon on a maximum maturity of eight years. The other, for Eurofins, offered 8 per cent on a seven-year maturity.

In view of the difficulties encountered in marketing finished fertilisers, Israel Chemicals intends to enter into partnerships with European companies so as to ensure outlets for its phosphates, he reported.

Gen. Maklef further disclosed that three subsidiaries—the Timna copper mines, the Sodom phosphate plant and the Arad phosphate acid plant—incurred a combined loss of \$4m. with the Timna copper mines, which are

West German SE turnover more than doubled

By Guy Hawtin

TURNOVER more than doubled in 1975, the year that Continental Gummifabrik, the West German tire company, was back on the road to profitability after three years in the red. By the end of 1975, the year of break-even, analysts, however, point out that despite the huge turnover increase there were no signs of real substantial new holdings being built up.

Deutsche Bank, the largest of West Germany's commercial banks, also saw a hefty increase in share trades. The bank, which had a particularly good year in 1974 and an even better one last year, registered a turnover exceeding more than half the number of shares issued.

They also commented that moves to limit shareholders' voting rights appeared to have little effect on the popularity of shares. BASF, Bayer, the Deutsche bank and Mannesmann had introduced limitations on voting, yet, despite acrimonious debate at the annual meetings, the shares of all four concerns remained much in demand with high turnover rates.

AEG-Telefunken held the 1975 record for share trades in a single day with a turnover of 66,781. It was followed by VW with 39,845, Siemens, 37,459, BASF, 37,747, Deutsche Bank, 34,889, Bayer, 33,379, Hoechst, 32,592, Veba, 30,862, Thyssen, 28,753, and Mannesmann, 26,424.

FRANKFURT, Jan. 20.

New issue from Uddehol

By William Dulifice

STOCKHOLM, Jan. 20. Uddehol, the forestry and steel company, planning to strengthen its financial position by share issues after a pre-tax earnings from Kr. 157.2m. last year, to roughly Kr. 120m. in 1976.

Mr. Gunnar Wassman, managing director, blamed the poor performance in the concert paper and steel market and forecasts a further decline this year. He expects a "substantial" increase in turnover in 1977 and 1978.

The financing of it, as well as the development of working capital, is the reason for increasing capital by Kr. 28.2m. to (26.2m.). The Board has decided by a new issue that a share of 100 Kr. will be followed by a bonus issue of one for

Taking a price of Kr. 120m. on the Stockholm Exchange and making allowance for dividends, an Uddehol would be worth Kr. 112 new issues. Shares but preference issue entitled to the bonus would also be eligible dividend. The bonus entitles writing up the concern's farm property.

If taken up in full, issues would bring Kr. 149m. (16.5m.) to enlarge borrowing capacity.

SKE takes 66 of Sarm

By John Walker

STOCKHOLM, Jan. 20. SKE, the Swedish ball-bearing group, has acquired 66 per cent holding in concern, Societe Annoncher de l'Applique (Sarma), announced today. The company manufactures

structural rods, filing rods, and control cables for European aircraft and aerospace helicopters, armoured vehicles and other investments in Nederhoff United, the troubled Dutch building company which is being split up by the government and Ogem taking over the building activities.

Dr. Bogers also elaborated on the subject of exports and the problems involved. He said that it was difficult to achieve a reasonable profit on exports from Holland, which accounted for 60 per cent of its Dutch chemicals production—Dutch sales accounted for about 75 per cent of total turnover. He also said that the company's export competitive position was at stake, something it shared with the rest of the Dutch exporting companies.

These figures were given in a New Year's speech by Dr. W. A. J. Bogers, the DSM Chairman. He noted that, "including the engineering division, Ogem taking over the building activities, on the assumption

of total turnover, the DSM Chairman said.

Pakhoed confident on 1976

By Michael van der

PAKHOED, the Dutch-based storage, transport and property company, said it would continue to "conquer more difficult markets" in Western Europe at the beginning of this year, but experts say to be compensated by the developments in the U.S. On the whole, it was meeting 1976 "with confidence."

This was stated in the company's prospectus published here after the announcement of a proposed offering of U.S.\$25m. of notes due 1982 with an expected coupon of 9.25 per cent. The offer is made by an international group of underwriters led by Amro Bank and Morgan Stanley International.

In the prospectus, Pakhoed repeated that the net profit per share for the year 1975, adjusted for share distributions, would exceed the 1974 figure by more than 12 per cent. The results were almost in line with its budget for 1975 despite some adverse effects of the economic recession and the energy savings efforts in western Europe. Schenck, its transport sector, mainly in France, had been offset by the Property sector where the company had stated earlier certain significant sales had been made, dictated by market conditions.

It noted that its investment subsidiaries had provided for losses arising from their 16 per cent shareholding and other investments in Nederhoff United, the troubled Dutch building company which is being split up by the government and Ogem taking over the building activities. "on the assumption

AMSTERDAM, Jan. 20.

A setback for DSM

By Michael van der

DSM, the state-owned Dutch chemical company, saw its sales rise to about Fl. 7.7bn. in 1975, which represents an increase of only about 10 per cent compared with the year before when sales had jumped by 50 per cent. Although profits were expected to be below the exceptionally high level of 1974, they were lower than anticipated in 1975. In fact, they fell below the earnings of two years ago (Fl. 185m.).

These figures were given in a New Year's speech by Dr. W. A. J. Bogers, the DSM Chairman. He noted that, "including the engineering division, Ogem taking over the building activities, on the assumption

of total turnover, the DSM Chairman said.

Israel Chemicals spending

By L. Daniel

A NET PROFIT of \$10.7m. sterling, after the allocation of \$5m. to sterling for payment of taxes and \$1.5m. sterling for the payment of royalties to the Government in respect of the 1974-75 fiscal year has just been announced by the Government, he reported.

The shares picked up to 178c yesterday ahead of the figure, but the announcement found them 8c lower, more in response to market weakness than to the good profits. Hubert Davies is likely to score a further advance in the current year.

The Nabsi Zin mines are to drop to 1975-76 by \$15m. or 20 per cent to \$55m. as a result of reduced world market demand for fertilisers and strong competition in the field of phosphates.

At present, the company's sales of phosphates account for only 50-60 per cent of production capacity, while the proportion for potash is 80-85 per cent. It may be expected therefore that substantial stocks will accumulate, but Gen. Maklef expressed the belief that exports will pick up towards the end of the current calendar year.

In view of the difficulties encountered in marketing finished fertilisers, Israel Chemicals intends to enter into partnerships with European companies so as to ensure outlets for its phosphates, he reported.

Gen. Maklef further disclosed that three subsidiaries—the Timna copper mines, the Sodom phosphate plant and the Arad phosphate acid plant—incurred a combined loss of \$4m. with the Timna copper mines, which are

to be closed down pre-tenancy, accounting for three-quarters of this loss.

Turning to the company's development plans for the next five years, totalling \$200m., which have already been approved by the Government, he reported that about half of the \$40m. earmarked for the infrastructure and development of the newly opened up phosphate mines at Nahl Zin had already been invested.

The Nabsi Zin mines are to be expanded with an investment of \$20m. or \$22m. worth of exports, as compared with an investment of \$15m. or \$17m. worth of imports.

In the planning stage, but not yet approved are further investments totalling \$145m.

The lion's share of this is to go to the new mines and the provision of storage and handling facilities at the Mediterranean port of Ashdod at a cost of \$10m. The Arad phosphate acid plant for

phosphate acid plant is to be rehabilitated at a cost of just over \$1m. and is then expected to contribute \$7.5m. per annum to export earnings. A new phosphate granulation plant is expected to add a similar sum to exports.

Bromine production is to be expanded at a cost of \$1.4m. with the additional 20,000 tonnes expected to bring in \$6m., while the transfer of the bromine compound plant will add 60,000 tonnes or \$24m. worth of exports as compared with an investment of \$10m.

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This announcement appears as a matter of record only.

January 15, 19

\$20,000,000

The Trane Company

\$7,500,000 Notes due 1983

\$12,500,000 Notes due 1995

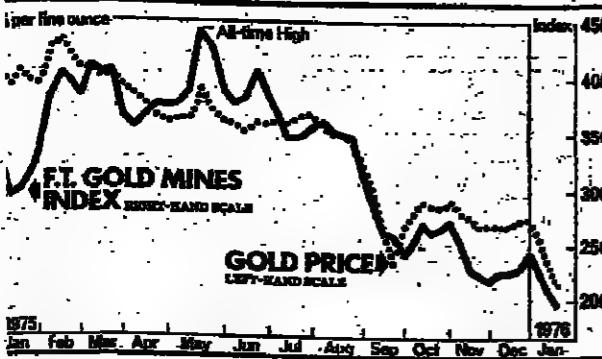
The undersigned arranged the placement of the above Notes with institutional investors.

Smith, Barney & Co.
Incorporated

SELECTED EURODOLLAR BOND PRICES MID-DAY INDICATIONS	
STRAIGHTS	
American Express 1980	100
Ashland 1980	102
Australia 1987	98
Burrard 1980	98
Calgary 1980	98
Carrier 1987	94
Conoco 1985	104
Conoco 1986	102
Conoco 1987	104
Continental 1980	102
Continental 1981	102
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Continental 1992	102
Continental 1993	102
Continental 1994	102
Continental 1995	102
Continental 1996	102
Continental 1997	102
Continental 1998	102
Continental 1999	102
Continental 1980	102
Continental 1981	102
Continental 1982	102</

MING NEWS

A fresh retreat in Gold shares



AND Gold shares wilted yesterday. The bullion was subjected to nervous especially when the price below the chart resistance of \$228 per ounce, to some observers seemed to assistance points of \$210, \$200, and even \$190, there was also buying. The price closed down on the day at \$124.25, est since January 11, 1974, various factors unsettling the market. The pending tin Monetar Fund said at \$25m. ounces (equal to one year's South African) over the next four years of further U.S. gold reports of recent Chinese and Soviet managers, and their relevance to the coming move, it being argued he Republic's need for exchange is heightened in Angola. In fact, seemed to have and for the yellow metal, it is the International Monetary Fund take some action towards the price if only because latter's fall is lessening anticipated profits on the gold sale which are to help the developing

stare prices followed the fall, allowing the miners, lower by 15 to 20 per cent, to profit from falling ore grades and low copper prices. Moreover, it is feared that if there are no fresh copper ore discoveries at Mount Morgan, the mine's economic reserves could be reduced to an inoperable level by 1978. Fortunately, Peko has made other finds in the Northern Territory in the potential 50% its Range uranium deposit which is shared with EK Industries. Peko said 5p to 40p yesterday.

PEKO'S FALLING COPPER OUTPUT

Australasia's Peko-Wallace reports that its copper production in the 24 weeks to December 23 dropped to 4,230 tonnes from 12,193 tonnes in the same period of 1974. Early in February, the Australian producer suspended its copper operations at Ranger Creek in the Northern Territory owing to low metal prices increased costs and technical problems.

The copper smelter at the group's Mount Morgan mine in Queensland was closed between April 27 and July 18 for extended maintenance work. Earlier this month, Peko said that it was to close its mill at Mount Morgan for the remainder of the year. It is lowest since December 1974. The following table gives

of price changes covering the holding company, and the newer and older with dividend yields based 1975 distributions.

1975 Dividends per share

WALL STREET + OVERSEAS MARKETS

Up another 6 in near record volume

BY OUR WALL STREET CORRESPONDENT

THE NEW YEAR rally continued on Wall Street to-day. The Stock Market pushed moderately higher after overcoming mid-session hesitancy.

After reacting 2.76 to 940.96, the Dow Jones Industrial Average moved up to 949.84, making a net gain of 6.14. The NYSE All Commodity index rose another 26 cents to 532.33, while rates fell by 524.20 to 531.

Trading was active at 36,800, up 7,240, on the day and the second heaviest on record. The total record of 38,450, was set last Thursday.

The market continued to reflect a growing confidence in the rally. Buying was also encouraged by President Ford's promise, incoming for Commodity Stock buying, his new bid for a tax reduction, and his request for encouragement of Corporate expansion in pockets of high unemployment.

In the economic news, Gross National Product, adjusted for inflation, rose at a somewhat slower rate in the fourth quarter than earlier projected by economists.

Some profit-taking was encouraged by the GNP report and earlier reports indicating more intense fighting in the Lebanon. Ell Lilly were lifted \$1 to \$50 on its raised dividend.

Caterpillar Tractor climbed \$1 to \$71, also on higher earnings. RCA gained \$1 to \$344, following improved profits.

Long-Term Investors moved up \$1 to \$271, IBM \$2 to \$323, Hewlett-Packard \$4 to \$112, and Fairchild Camera \$1 to \$481.

Chrysler picked up \$1 to \$121.

Ford Motor \$1 to \$51, Dow Chemical \$1 to \$107, Texas Instruments \$2 to \$121, and J.P. Stevens \$1 to \$21.

But Zapata fell \$1 to \$104—it expects lower earnings.

Bell and Howell surrendered \$1 to \$17—it believes 1970 earnings will be charged with \$150,000 after taxes.

The American SE Market Value Index rose 0.65 to 93.00, while advances led declines by 405 to 315.

OTHER MARKETS

Canada mixed

Canadian Stock Markets were mixed in moderate trading yesterday.

The Industrial Share Index rose 0.54 to 184.38, Utilities put on 0.52 to 184.48, and Papers gained 1.71 to 112.11. But Golds gave way 4.17 to 244.08. Base Metals eased 0.05 to 301.6. Western Oils dipped 0.92 to 240.62 and Banks lost 0.75 to 240.02.

Stocks of Canada advanced \$1 to \$231, Domtar gained \$1 to \$331. Massey-Ferguson were up \$1 to \$231 and Algoma Steel put on \$1 to \$264.

Stearns, Dill & Tel. lost \$1 to \$142.

Montreal Stock Exchange

rose 0.52 to 184.38.

Montreal Stock Exchange

FARMING AND RAW MATERIALS

oor seed
its Soviet
rain hopes

MOSCOW, Jan. 20.

DA COMPLAINS to-day that grain for this year's sowing is below standard in all areas of the country, farmers elsewhere are slow to prepare farm land for spring sowing, a leading article on its page, the Communist Party says time is short and the ion needs to be put right quickly. It reminds its in the countryside that new economic plan calls for average grain harvest of 220m. tonnes over the five years.

Article avoids reference to man's harvest which (from official figures) appears to be 133m. t. 137m. — the worst for 10 years. It says this year is an instant first stage in increasing the total crop by about 0 new tractors and over 1,000 combines harvesters will be used to help in achieving the increase.

is up to the harvest for whom the cornfield is key labour front," the declares.

oarse grain
ide recovery
recast

CANBERRA, Jan. 20.

WORLD'S coarse grain industry is expected to recover to record levels in production, sowing and trade in 1976, according to the Bureau of Agricultural Economics.

ates situation and outlook for coarse grains (maize, oats, sorghum and rye) that, for the first time in years, world consumption is expected to exceed production.

umption exceeded output in year from 1972/73 to 1973/74, resulting in stocks falling from 74m. tonnes at a guning of 1972/73 to 46m. end of 1974/75.

alian coarse grain plant are estimated to have increased by about 6 per cent. in 6, but production is likely to be about 7 per cent. as of dry conditions delay and fears of further large warehouse stocks during the year.

tin-Low prices, values driven following a combination of increased, charter and hedge selling in morning

and the morning's trading in the afternoon, saw prices rise to 1971/72. Three months later, cash prices initially landed to 1971/72, but were then further to forward market trading is before ending to 1971/72 on profit. In the afternoon, prices were reduced, prices were reduced and fears of further large warehouse stocks during the year.

tin-Low prices, values driven following a combination of increased, charter and hedge selling in morning

COMPANY NOTICES

DE BEERS CONSOLIDATED MINES LIMITED

(Incorporated in the Republic of South Africa)

NOTICE TO THE HOLDERS OF PREFERENCE SHARES

Other to the dividend notice advertised in the Press on the 28th November, the conversion rate applicable to payments in United Kingdom currency on the dividends listed hereunder, is £1 = R1.77175.

Dividend

Amount of Dividend, U.K. Currency Equivalent per Share

Currency per Share

100 cents £6.442000

4 cents £2.370000

a effective rate of South African Non-Resident Shareholders' Tax is 15

For and on behalf of the United Kingdom Transfer Secretaries

D. M. J. PATTISON

Other

Office of the United Kingdom Transfer Secretaries

Charter Consolidated Limited

P.O. Box 102

Charter Street

Ashford Kent TN24 8EQ

MARCH 1976

NSOLIDATED COMPANY BULFONTEIN MINE LIMITED

SRIQUALAND WEST DIAMOND MINING COMPANY,

DUTOITSPAN MINE LIMITED

(Both companies incorporated in the Republic of South Africa)

DECLARATION OF DIVIDENDS

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MARCH 1976

PERSONAL

CANCER RESEARCH
IS VITAL

Cancer Research is really Please send a donation now to the Imperial Cancer Research Fund, Dept. 1778, P.O. Box 155, Lincoln's Inn Fields, London, WC2A 3PX. It will be used in the fight against cancer.

W. H. HARRISON, Secretary

1 Street

South Africa

MARCH 1976

4 AFRICAN INDUSTRIES
AND WINES LIMITED

Corporation in England

MARCH 1976

5 HEREY GIVEN that the above-named company will pay £100,000 to the Imperial Cancer Research Fund, Dept. 1778, P.O. Box 155, Lincoln's Inn Fields, London, WC2A 3PX. It will be used in the fight against cancer.

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Lebanon: Guerillas clash with army

BY OUR FOREIGN STAFF

NO SOLUTION to the Lebanese political crisis was in sight last night as Moslem, Leftist and forthcoming Palestinian forces—strengthened by thousands of men from across the Syrian border—fought for full control of the north east and south of the country and clashed with Army units.

Amid heightened international concern, the identity of the reinforcements from Syria, who were reported to be anything from 3,000 to 8,000, remained a critical factor in the deteriorating situation.

There appeared to be little doubt that the ranks of the forces fighting the Right-wing Christian militia in the Bekaa Valley in the east and the Akkar region in the far north had been swollen from the "Palestine Liberation Army's" "Yarmouk" Brigade which is stationed in western Syria.

But many may also be reinforcements from the Damascus-sponsored guerrilla movement.

Yesterday, in Damascus, officials strongly denied the claim of Mr. Canille Chamoun, Lebanese Minister of Interior and Maronite Christian leader, that units of the Syrian Army had entered Lebanon.

In Israel, which has threatened retaliation against any direct Syrian intervention, the Government still appeared to be viewing

U.N. appeal

He added, however, that it amounted to the same thing because elements of the PLA needed the permission of Damascus to cross the border and the corps was not only Syrian-trained but also Syrian-officered.

En route for Moscow, Dr. Henry Kissinger, U.S. Secretary of State, issued a statement calling on all outside powers—including Israel and Arab countries—not to intervene.

Dr. Kurt Waldheim, UN Secre-

tary-General, appealed for an end to strife after a meeting with the chief Lebanese delegate.

Hopes for conciliation now centre heavily on Syria. Last night it was announced that Mr. Abdel Halim Khaddam, Syrian Foreign Minister, and Major-General Chehab, Chief of Staff, as well as Major-General Naji Jumil, were flying to Beirut for consultations with President François.

But there are still divided views as to if and to what extent U.N. units should be regarded as Syrian forces.

Mr. Chamoun qualified his statement of Monday night that 15,000 Syrian troops had crossed the border to the extent of saying: "Some people say they are from the 'Yarmouk' Army, some people say they are the Syrian Army."

Telephone communications with the north and east were cut, but reports said that the Palestinian and Leftist forces had over-run Army outposts in the Akkar region and were besieging the Christian town of Al Qayat.

In Bekaa Valley they were attacking Zahlé which was being defended by Army units in the Quarantine district of Beirut, taken by the Christian Phalangists on Sunday, a Moslem pocket of opposition was still holding out.

Crisis in Lebanon, Page 7

Doubts on future of steel chief

BY ADRIAN HAMILTON

IT SEEMS increasingly unlikely that Sir Monty Finniston will be appointed as chairman of British Steel after his current contract runs out in September.

In a talk to a Birmingham Chamber of Commerce meeting yesterday Sir Monty referred to the time in "September when I depart this glorious life."

Although there may have been an element of flippancy in the remark, this is the first time that he has referred to public the prospect of his leaving the job in September.

The reference undoubtedly reflects a growing acceptance on Sir Monty's part that the Government is most unlikely to renew his contract, for any period.

While Sir Monty has kept well out of the latest conflict between the unions and the Corporation over labour-shedding, previous incidents in his relations with unions and the Department of Industry make Ministers feel a new man is needed.

On his side Sir Monty, while not refusing to be considered for extension of his contract, is re-

March poll in Speaker's constituency

By Richard Evans,

Lobby Correspondent

MR SELWYN LLOYD's announcement yesterday that he will resign as Speaker of the Commons on February 3 means there will be a March by-election in the Wirral, a safe Tory seat.

The other by-elections pending at Coventry North West and at Carshalton, make it almost certain that the Government's present overall majority of one will have disappeared by the end of March.

In view of the latest unemployment figures, the Tories are increasingly hopeful of capturing Coventry North West, where Labour had a majority of under 7,500 in the October '74 election, and on increasing their majorities at Carshalton and the Wirral.

Mr. Lloyd, a well respected Speaker since 1971 and before that Foreign Secretary and Chancellor of the Exchequer, held the Wirral with a majority of over 13,000 in the last election.

The Liberal candidate, who has been re-adopted, polled more than 12,000 votes at the last election.

The Conservative candidate is Mr. David Hunt, a former national chairman of the Young Conservatives who caused a furore at a Conservative Party conference four years ago by publicly attacking Mr. Enoch Powell.

Mr. George Thomas, the present deputy Speaker and Labour MP for Cardiff West, is almost certain to be elected Speaker on February 3, as he has the support of Conservative as well as Labour MPs.

One of the present deputy chairmen of Ways and Means, Mr. Oscar Morton, Conservative MP for Poole, will carry on, leaving a vacancy for another deputy chairman.

The Conservative Party could decline to fill the vacancy, thus causing a further erosion of Labour's majority, but the indications last night were that they would be prepared to put up a candidate.

The Speaker and his deputies are not entitled to vote in the Commons.

● TUC leaders last night described the figures as "disturbing" and "disastrous" and made it clear they would continue to press the Government to take steps to reduce jobless levels.

Men and Matters, Page 14

Continued from Page 1

Jobless post-war peak

many of the students are genuinely seeking work when they register.

Students apart, there is no questioning the increasing seriousness of the U.K. unemployment problem.

While the basic figures may be the result of a large flow on and off the register in each month—averaging 373,900 joining and 365,800 leaving in the October-December quarter—it is calculated that some 981,000 of the people aged under 20 on the register this month have been unemployed for longer than four weeks.

Less up-to-date estimates based on figures to October suggest that in Great Britain at that time 357,000 had been out of work for between two months and six months, and a further 154,000 for between six months and a year.

In addition to the fully unemployed, there were a further 140,000 people on short-time working in mid-January, according to Department of Employment estimates.

The official figures for vacancies notified in employment exchanges also paint a depressing picture, with a further drop of 5,600 to 102,300 in the seasonally adjusted statistics this month.

A regional breakdown shows that between December and January the biggest changes have occurred in East Anglia, the South-West and the West Midlands, where unemployment has in each case risen 0.3 per cent points to 4.6 per cent.

The U.K. average this month of 5.2 per cent, seasonally adjusted wholly unemployed includes variations from 3.7 per cent in the South-East to 6.5 per cent in the North, 6.5 per cent in Wales, 6.1 per cent in Scotland and 5.8 per cent in Northern Ireland.

● TUC leaders last night described the figures as "disturbing" and "disastrous" and made it clear they would continue to press the Government to take steps to reduce jobless levels.

BY JUREK MARTIN, U.S. EDITOR

THE ECONOMIC IMPACT of President Ford's State of the Union message last night is reckoned here to be broadly neutral. As was widely expected, the President eschewed grandiose new programmes and concentrated on technical improvements in certain ailing sectors of the economy.

Most of his proposals had been advanced before, either by himself or other members of his administration. It has been known for some weeks that Mr. Ford would recommend a further \$10bn. tax cut, to go with the \$18bn. reduction due to expire in the middle of the year, but that he would balance this by reducing Federal expenditures to \$395bn. ceiling, \$29bn. below what they would have been if economies had not been exercised.

In fact, Mr. Ford has taken a certain pride in reducing spending to below \$395bn.—to \$394.5bn. to be precise—which, according to Administration projections, will produce a budget deficit of \$43bn. in fiscal 1977, compared with an estimated \$70-\$75bn. deficit in the current year.

The White House believes that the incentives in this last proposal could be substantial. The

Power bills will rise 15%–20% by midsummer

BY ROY HODSON

result, the price of electricity will have to go beyond 2p a kilowatt-hour.

The electricity industry is also negotiating with the Government to have electricity removed from the scheme for selective price restraint by industry.

The Electricity Council is now completing the details based on the annual figures submitted by

the area electricity boards.

But already it is certain that the Council will have to ask the Government for the maximum increases in its tariffs allowable under the Price Code.

The Council is looking for permission to raise prices by an average 10 per cent from April.

Industry would pay some 8 per cent more and domestic users over 10 per cent more.

In addition, the electricity industry is allowed to pass on extra fuel costs.

It expects to add 1 per cent from April to cover increased fuel bills during the past year.

But the National Coal Board is also expected to seek price rises for coal from April. Any such rises will work their way through to electricity consumers.

"No one in industry likes additional costs when we are doing our best to hold down inflation.

However, the CBI has long maintained that nationalised industry prices should reflect their costs.

"The CBI would object far more to the Government attempting to hold down prices with subsidies which would increase the public borrowing requirement."

Companies and the tax season

Index rose 1.5 to 396.2

while the market as a whole advanced some 15 per cent, a big two-way trade-off week has emphasised the extent of the new appraisal of the results for 1975 month.

Provident has an unchanged dividend

yield of 8 per cent.

The group has no obvious

growth products requiring the

support of new money. And it is not even as though it is in

any urgent need of cash.

Borrowings have been reduced

by about an eighth since the

last balance sheet, and there

seems to be no problem about

rolling over the lump of short-

term debt which is due for

repayment this year.

Despite all this, the rights

issue is very likely to be a

success—and not simply

because of the mechanical way

in which issues can be organised

these days. It is just possible

that the group has turned some

kind of corner: at any rate

management has made itself

more evident recently—

especially in the U.S., where

from adverse economic

conditions. The company

is facing the worst tra-

ditions since the war

at the end of the year

through 1976-77.

Of course Baker Perkins has

had its share of false dawns

Next month's EGM will provide

an admirable opportunity to

explain why things are going to

be different this time.

See also Page 33

Baker Perkins

On paper,

the

idea

of

putting

new

equity

capital

into

Baker

Perkins

seems

absurd.

The

share

price

has

made

no

overall

improvement

over

the

past

15

years.

The

return

on

capital

employed

is

less

than

11

per

cent

over

the

last